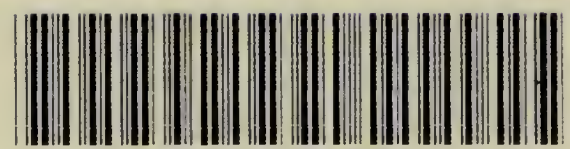
How To Strengthen Memory

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FIRST PUBLISHED EDITION.

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PREFACE.

THIS small work is an abridgment of a larger text book, yet it contains all that is essential to the acquirement of the system. What is omitted is chiefly theoretical; but its practical side is greatly extended by many new and useful applications. (See table of Contents.)

It is written mostly for those who wish to acquire and use the system without studying deeply the principles embodied in it. These may be studied afterwards from the larger text book if desirable, but this is written in the briefest manner to meet a present as well as a pressing need.

Its distinguishing feature is the prominence and importance given to Presentation in cultivating memory. It shews that right presentation is the true secret of perfect impression; that memory taxing associations are not in the least necessary in order to link together facts and ideas in the mind. Memory does this of itself through the Law of Contiguity, and does it perfectly, if they are only concisely presented. This conciseness is gained by using only the essential elements of Suggestion, and thus reducing the Presentation according to the "Rule" given.

This "Rule" will be found in the chapter more especially dealing with the subject, and also in "Applications to Geographical Names" on page 66.

The price of the larger text book is Sixpence more than this.

CHAPTER I.

PRIMARY PRINCIPLES EMBODIED IN THE SYSTEM.

The system aids and develops memory by the following processes :—

1. Assimilation of numbers and words by approximating affinities of sound.

2. By new and simpler forms of Recollective Analysis and Synthesis.

3. By a twofold correlation of ideas when analysis reveals no affinity between them.

4. By a principle of Root-words suggesting the phraseology in which ideas are expressed.

5. By a special and triple form of Interrogative Analysis and Synthesis operating only through the Root-words.

6. By using a certain Rule of Presentation which always harmonizes with the laws governing mental impression.

CHAPTER II.

REMARKS UPON THE PRINCIPLES.

The six principles enumerated on the preceding page not only aid memory but cultivate and strengthen every power of the human mind. The system leaves no faculty unemployed, but brings all into the service of memory, directly or indirectly. The development of memory is only one of many advantages resulting from its principles, for their daily practice will develop in the mind powers of a high order, and gifts of the greatest value in every career. The system is not only comprehensive but complete. The six principles embodied in it meet every need and fit every variety of mind: and all are absolutely essential, though all need not be used at the same time.

Though there are only two great laws of memory—Similarity and Contiguity—yet these manifest themselves in such endless variety of form that other minor laws have been derived from them designed to meet certain needs and certain cases. To cultivate the memory all round, to aid it in all its operations; to make it quick to acquire, strong to retain and ready to reproduce; to do this, requires many and special adaptations of the two great laws before referred to, and also a wise and judicious application of them.

Out of many aids to memory given to the world, there are few but what have transgressed one or other of its own primary laws: and even some of the principles just enumerated have been so misused and misapplied as to destroy the very powers which they are calculated to aid and strengthen when rightly used. This is true of the principle of Correlation as of others, and we are the first who have defined its legitimate uses and pointed out the conditions and operations of memory in which it may with safety and advantage be employed. The six principles named, form the basis of the system and are

employed in varying forms throughout the work in combination with each other. In many respects, the last-mentioned is the most important, for it should be ever present before us, and should influence all our methods of using and applying the other principles. This is the first system which has ever dealt practically with the law of presentation, and reduced it to a fixed rule. That there is some law governing presentation all are conscious of. The fact that all concise forms of speech, such as proverbs, mottoes, maxims, etc., easily stick to our memories and refuse to be forgotten, has made many reflect upon the possibility of giving to every subject such elements of conciseness and suggestion as shall make every presentation perfect and as difficult to forget. This is the design of the Rule of Presentation, around which the chapter upon this subject centres. (See Chapter VIII.) A wide study of this subject will convince everyone of the value of the Rule by which the student is guided to a conformity with the requirements of this law.

CHAPTER III.

ASSIMILATION OF NUMBERS.

How other Systems have Dealt with Numbers.

All mnemonists, up to the present, have tried to aid the memory of n mbers by using what are termed "keys" or "Figure Alphabets," and we here insert one —the "key" used by the late Professor Loisette.

1	2	3	4	5	6	7	8	9	0
t	n	m	r	l	ch	c	f	p	z
d					sh	k	v	b	c soft
th					j	q			
				soft	g	g hard			

For nearly 200 years this method has been employed without anyone ever thinking out a better, and it is still used by every teacher of memory, and forms part of every system taught to-day, excepting the one contained in this book.

Of course, these figure alphabets sometimes vary in form, each teacher altering the representative letters to suit his own taste, but all employ them, though their disadvantages have been deeply and widely felt since Dr. Gray introduced them in 1730. Not only is there the great difficulty of learning them owing to their arbitrary character, but also the difficulty of forming the allotted letters into sensible and rememberable words. Both of these difficulties are altogether removed by the natural assimilation of numbers and words embodied in the Rules of Sound following this chapter.

These are based upon a law of affinity so rational and simple that once perceived the natural similarity of the numbers and sounds will never fail to suggest each other. Every day the relationship will become more obvious until the names of everything around us will be able to suggest numbers to us without having to learn

anything by heart or tax our memory with any key or table whatever.

Besides this, the difficulty of forming letters into words is obviated, for words ready made are always at hand, the whole English language being at our service with very few exceptions.

We have ourselves compiled for the use of students various supplementary papers comprising thousands of numerical facts and historical dates, without having need, but very rarely, to use even a syllable twice over. The Rules are based upon the great law of Similarity, and if the directions for studying them are carefully followed they may be acquired in a very few minutes: and if the sounds are audibly articulated, the suggestive element in each syllable cannot fail to give the number.

Thus, without burdening his memory with any "key," the student is possessed of a new power of illimitable adaptation, and the language which he has used since childhood is endowed with a new significance, and is capable of suggesting numbers to him in every variety of form.

CHAPTER IV.

THE "RULES OF SOUND" AND EXERCISES.

Directions for Acquiring the "Rules."

The "Rules of Sound" on the following page must not be learnt by heart under any circumstances.

First read the Rules carefully, observing, that as they refer to ten numerals, so they deal with ten different classes of sound.

Then read again each rule, articulating aloud the examples along with the sound of each numeral, thus—ton one son one, can one, fan one, etc., as in the first rule.

This must be done until the reader clearly perceives the affinity between the sound of each numeral and the sound of the words approximating to them and is able to detect the numbers indicated by them.

The "Glossary of Words" will afford the reader ample scope for testing his proficiency.

This proficiency must be acquired, not by study, but by constant practice when about his or her ordinary duties, seeking for numbers in every object and in every word mentioned.

The names of persons, places, and everything coming before the student must be instantly translated into a number, and by so doing the Principles will become unconsciously a part of himself and never be forgotten.

Syllables ending with p, b, l, d, and th cannot be used except when sounded with long vowels, and when a word cannot instantly be translated into a number it is because it will be found to contain one of these five exceptions.

Thus the sounds—top, tib, til, ted, teth, cannot be used because they bear no resemblance to the sound of any figure; but when combined with long vowels they do. Thus—type, tribe, tile, tied, and tithe all represent 5; and tube, tool, tude, tooth all likewise represent 2.

Therefore, these five exceptional sounds are re-instated by the aid of the vowel rules, and thus is every sound in the language brought into service either directly or indirectly.

As will be seen, the approximating sound of each syllable is the primary element suggesting the number, therefore one syllable stands only for one figure, two syllables for two figures, three syllables for three figures, thus—de 3, delude 3 2, delusion 3 2 1.

For examples of application, see Historical Dates, etc., Part II.

Assimilating Principles or Rules by which the Combination of Language and Figures is Effected.

The principle embodied in the following Rules is that of representing figures by those syllables in our language which give similar or approximate sounds.

It will be observed that five of the Rules are dependent upon the vowel sounds U, E, I, A, O ; while the remaining five are
2 3 5 8 0
purely dependent upon the consonants, being entirely governed by the consonantal sounds terminating the syllables.

Figure 1, word One, is represented by any syllable in which M or N has a blunt sound as in the case when following the strong vowels A, O, U, as in Ton, Son, Can, Fan, Hum, Drum, Gun, Run, &c.

Figure 9, word Nine, is represented by M or N having a sharp sound when following the weak vowels E, I, as in Limb, Rim, Pin, Pen, Hen, &c., but it must be borne in mind that these Rules respecting the consonants only apply when the vowel in the syllable has not its long open sound, but only when M or N is the principal and terminating sound according to the above examples.

Figure 2, word Two, is represented by any syllable giving the vowel sound of long U or OO, or any similar sound, as in Tune, Fume, Plume, Look, Book, Nook, Shoe, Few, Pew, View, Knew, Drew, You, &c.

Figure 3, word Three, is represented by any syllable giving the vowel sound of long E, as in Tree, Me, See, Be, Flee, Flea, Free, Knee, Key, Glee, Plea, &c., or when sounded long before D, as in ended, mended, &c.

Figure 4, word Four, represented by syllables sounding R as principal sound, as in Cur, Fur, For, Or, Err, Er, as in Commander, &c.

Figure 5, word Five, is represented by any syllable giving the vowel sound of long I, or the dipthongal sound of OI or OY, as in Boy, Buoy, Soil, Oil, Kite, Light, Night, Right, Time, Lime, Rhyme, Chime, &c.

Figure 6, word Six, is represented by any syllable sounding X or K as the principal or terminating sound, as in Mix, Fix, Box, Fox, Brick, Rick, Dock, Lock, Rock, &c., or by G or C ending a syllable and sounded hard, as in Twig, Fig, Big, &c.

Figure 7, word Seven, is represented by syllables sounding S, V, or F, as principal or terminating sound, as in Dish, Fish, Lash, Cash, Deaf, Muff, Sieve, Live, Dove, Love, &c.

Figure 8, word Eight, represented by any syllable giving the vowel sound of long A, as in Ray, May, Say, Nay, Lay, Bay ; or by any syllable ending with T, in which T is the principal sound, as in Bat, Sat, Pot, Hot, Kit, Hit, &c.

Figure 0, is represented by any syllable giving the vowel sound of long O, as in Doe, Sow, Low, Mow, Mole, Sole, Soul, Coal, Roll, Pole, Home, Lone, Moan, &c.

As will be seen, these Rules only have respect to ths sound of words, not the spelling ; as the letter I may be taken to represent 3 when it is sounded short, as in Gratitude ; so when I has a full sound in connection with N, as in Line, Nine, it may be taken to represent 9, as it exactly sounds it ; also, when O is sounded with R, as in Dore, Sore, More, Four, it may likewise be taken to represent 4 ; in like manner the broad sound of A as in Pa, Ma, may represent 4 ; thus, the words Russia, Prussia, would indicate 74, like the word Usher.

When two consonants terminate a syllable, and both are sounded, the first consonant only must be taken to indicate the figure, as in And, Ant, Mong, Monk—all signifying one ; as also in Mart, Cart, Turn, Burn, Hard, Bard, Turk, Firk—all signifying four ; in like manner then terminal *ing* must always be taken to represent 9.

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Exercises on the Rules of Sound.

The student must know well the "rules" before attempting this exercise.

Write from memory the numbers indicated by the following words. Each word indicates three figures. Write, in pencil, to admit of correction, the number opposite each word, as shewn with the first word in each list.

Toronto 4 1 0	bribery 5 4 3	butterfly 8 4 5
Burgundy	quietness	satisfy
circular	nightingale	infusion
circumcise	explosion	vinegar
torpedo	October	stimulate
fortitude	occupy	intrinsic
harlequin	explicit	interlude
heretic	secular	interdict
martyrdom	dictation	inflection
survivor	desolate	inspector
correction	asbestos	inventor
character	ottoman	genuine
carpenter	Atlantic	singular
sarcastic	attribute	impostor
violin	flatterer	interlope

The above words are selected from the last three pages of the Glossary, from which the exercise may be corrected.

CHAPTER V.

ASSIMILATION OF IDEAS.

As with numbers, so with words and ideas, their natural assimilation depends upon the points of affinity discoverable or establishable between them. In our larger text-book we have pointed out ten different elements of affinity, which may be enumerated as follows:

Affinity of	sound	as in	mark—marque, check—cheque
,,	form	,,	miner—minor, currant—current
,,	meaning	,,	desire—wish, culculate—compute
,,	time	,,	Balaclava—Inkerman
,,	place	,,	Egypt—pyramid, St. Petersburg—Moscow
,,	incident	,,	Romeo—Juliet, Othello—Desdemona
,,	negation	,,	black—white, giant—dwarf
,,	causation	,,	Newton—gravitation
,,	succession	,,	Trafalgar—Waterloo, Plague—Fire of London
,,	co-existence	,,	Cain—Abel, Sodom—Gomorrah

The first three are elements of Similarity; the remainder are elements of Contiguity. These are the two great and primary laws of memory, and from them all other laws are derived.

From these two laws of association or memory, various minor elements or forms of Contiguity and Similarity manifest themselves which are easily recognised when once pointed out, and which have a great influence on recollection. The method of discovering, identifying, and classifying these various elements of affinity is shewn in the following chapter on Comparative Analysis.

When we have learned how to discover these assimilative elements, we then begin to utilise them by

building up our words and thoughts together, or whatever we have to remember, in such a way that their separate parts shall be suggestive of each other and readily bring each other to mind. Such is the work of Retentive and Recollective Synthesis, which is more fully treated in the larger text-book, but which is in this more clearly exemplified in the chapters dealing with Root Words.

By this process, every idea may be compressed into and represented by a single word. Therefore, our operations in the following chapter, and in many others, will mostly deal with words, as in the future our recollection of any series of ideas will resolve itself into a recollection of a few dependent words.

Besides, single words are more easy to analyse and to deal with than ideas. They bring ideas before us in a more concise, concrete, and rememberable form, and we shall therefore use a series of words in shewing the process of Analysis in the following chapter.

CHAPTER VI.

COMPARATIVE ANALYSIS.

What is termed "Recollective Analysis" we have divided into two distinct processes: (1) Comparative Analysis, which deals with words and ideas; (2) Interrogative Analysis, which deals more directly with phrases or sentences and the verbal forms in which ideas are expressed.

Analysis trains the mind to a recognition of three great laws of Suggestion or affinity—Similarity, Concurrence, and Contrast. These Analytical laws are derived

from the two great laws of association—Similarity and Contiguity—and they work in harmony with them.

From Contiguity we derive Contrast, which is a form of Contiguity sometimes called the negative of contiguity.

Concurrence also we derive from Contiguity. Concurrent ideas or words have become so through being originally contiguous. Therefore, Concurrence of any kind is either a form of Contiguity or a result of it. Thus the affinities of co-existence, cause, or succession are the result of past contiguity, hence we get Concurrence of idea. Therefore, we have four primary conditions of Concurrence: Concurrence of Time, Place, Incident, and Idea, which embraces the last three Contiguous elements enumerated in the last chapter.

Similarity can only exist in three kinds: Form, Sound, and Idea. Great care must be taken to distinguish between Similarity of idea and Concurrence of idea.

Ideas to be similar must be synonymous; but Concurrence implies relationship without similarity. Thus we have Similarity between Prison and Jail: but between Prison and Warder we have only Concurrence.

As stated, Analysis enables us to discover these elements of affinity between words and ideas by which they more easily become assimilated one to another.

The first process is Comparison,—that of comparing words one with another. By this we perceive their points of similarity or contrast, but only by careful observation can this be done.

The next process is Classification. When we have found some relationship between two words, we must think of what it consists, to which of the three classes does it belong, and also of what kind it is.

Thus, if we find an element of Similarity between two words, we ask ourselves "Where does it lie? Is it in the form, or sound, or meaning?" If an element of Concurrence, "Is it in time, place, incident, or idea?"

We here give a list of words, pointing out the affinities between them. S stands for Similarity, C for Concurrence, and Con for Contrast :—

marsh
mar } —S in sound, each giving also same number.
ruin } —S in meaning.
habit } —C of idea.
manner } —S in meaning.
mantle } —S in sound, first syllables.
cloak } —S in meaning
deception } —C of idea.
innocence } —Con.
font } —C of incident.
church } —C of place.
service } —C of incident.
servitude } —S in sound.
prison } —C of idea.

We give this list of words only as an example, so that the student can select other lists for himself and find out their affinities in the same way. When a list of words has been compared and classified, then do as we direct with this present list. Read the words carefully over, stopping to observe the connection between each word and its predecessor. Then endeavour to repeat the words without seeing them, beginning with "marsh." If one should fail to come to mind, mark it and pass on ; then when the list is finished, go back to the words missed and compare them again. The influence of this Analysis upon memory will be immediate and obvious, for the reader will find that the first word will bring the others

into the recollection. He will also be able, by a little reflection, to recollect them in any order, either backward or forward, one way as readily as the other. The most effective method of Comparison, especially when comparing foreign words with their English equivalents, is to write them legibly opposite each other, thus :

marsh	mar
mar	ruin
ruin	habit
habit	manner

This method shews up more clearly any peculiarities or affinities of form, etc. The briefest analysis will often suffice ; but if the words are representative words, standing for a series of important facts to be kept permanently in mind, then the analysis must be done both thoroughly and carefully.

When the student is unable to discover any affinity whatever between any two words which he wishes to remember, then he must connect them by the principle of Correlation fully explained in the next chapter.

Analysis of Numbers.

Not only words, but lines of figures may also be more easily remembered by comparing them one with another. They should first be divided into groups. (See "Rule of Presentation, chap. viii.) Then the differing value of each successive figure from the one before it should be carefully observed. An imaginary line, indicating this, drawn from the first figure will often assist and cause the first figure to bring the others to mind. Thus, take 4 2 6 8. From the first 4 the line would drop two figure spaces to indicate 2 the next figure ; then rise to two spaces above the starting point to indicate 6, and then rise two spaces higher to indicate 8. On a stave of ten spaces to correspond with the ten numerals, any short number may be indicated by a crooked line touching the particular spaces, the horizontal distances from one point to another equalling only the space of each figure.

The figures themselves might be made to occupy these imaginary positions, and thus their height and depth above or below each other would assist in remembering their character.

Only those with good visual memory would benefit by this plan, but all will remember short groups of numbers more easily by carefully observing in their own way the differing value of each successive figure.

These remarks only apply to very limited numbers; but for remembering numbers to any great extent, the "Rules of Sound" given in Chapter IV. must always be relied upon.

CHAPTER VII.

CORRELATION.

Correlation is the art of connecting dissimilar ideas or words by other words having some correspondence or relation to them.

We are the first writers upon Memory who have defined the legitimate use of Correlation, and have indicated in our larger text book the special conditions under which it influences memory and for what purposes and studies it should be employed.

We have adopted a twofold method of Correlation, embodying two distinct forms—Simple and Compound, which will tend to safeguard the principle from misuse. Simple Correlations are expressed in one word, and examples of both kinds, taken from the Latin Vocabularies in the larger text book, will be found on the succeeding page.

Simple Correlations should always be preferred when possible, as they more fully harmonize with the Law of Presentation. Compound Correlations, if too extended, enlarge the presentation, and thus weaken the force and concentrativeness of mental impressions. Correlation should be used to supplement Analysis, and only when Analysis and Presentation both fail should correlation be

employed. When perfectly done, Correlation is the highest and purest form of association, because it turns entirely upon natural correspondency. Like the "Rules of Sound" in Chapter IV., it is a modern application of the great law of Similarity, and is a great aid to memory when wisely employed.

Simple Correlations.

LATIN WORD	CORRELATION	MEANING
corona	coronation	a crown
vita	vitality	life
porta	portal	gate
nauta	nautilus	sailor
femina	feminine	woman
pecunia	pecuniary	money
agricola	agriculturalist	husbandman
dominus	domination	a lord
equus	equestrian	a horse

Compound Correlations.

ala	alacrity, swiftly, flying	a wing
aquila	a quill, a bird, large bird	eagle
columba	col, collar, ring, ring-dove	dove
ora	hoary, white, chalk-cliffs	coast
mensa	men, brave men, knights of round table	table
insula	peninsula, insulated land	island
hasta	haste, speed, swift, arrow-like	spear
avus	average, overaged	grandfather
gladius	gladiator, swordsman	sword
pulchre	sepulchre, white, ornate	beautiful

If the above are repeated but once or twice, reflecting upon each correlation, to forget their meanings afterwards will be almost impossible.

We have recently correlated, for the use of students, the whole of the Latin Vocabularies in Dr. Smith's "Principia Latina" This forms one of the list of Supplementary papers referred to at the end of the book and is one of the most valuable, the result of much labour, but a great saving of time to every student.

In learning foreign words, it will generally be found sufficient to compare each word with its English

equivalent. If this is done carefully, the analysis will often reveal some little affinity or contrast by which one will suggest the other, even if the Presentation itself does not suffice. But should a word repeatedly fail to come to mind after being thus analysed, then correlate them together after the manner of the preceding examples.

As before shewn, Simple Correlations are formed of one word only. Compound Correlations employ a number of words. Correlations should always be made as simple and concise as possible ; but it is better to use even three or four words and make the correspondency clear than to use one if the connection is vague and uncertain.

The most difficult words to correlate together are personal names, because such words have no meaning apart from the persons themselves. Yet it is often necessary to remember lists of names in connection with each other, such as the celebrities of different periods of history, the various characters of a popular story or play, or the persons connected with any great work or movement. We therefore here give as an example the names of Queen Victoria's Prime Ministers :—

Lord Melbourne	
	mellow fruit
Sir Robert Peel	
	apple, russet
Lord John Russell	
	rusling, racing
Lord Derby	
	horse race, railway race, London to Aberdeen
Lord Aberdeen	
	contrast—North, South, tropical palms
Lord Palmerston	
	waving, signalling, beacon
Lord Beaconsfield	
	harbour light, safety, gladness
W. E. Gladstone	
	stone, Stonehenge, Salisbury Plain
Lord Salisbury	
	similarity in sound
Lord Rosebery	

If the student will read these names but once over, carefully observing the correlative ideas, he will be able to repeat them from memory. A very long series of names, facts, or events may be learned by the aid of the "Key." (See Chapter XIV.)

It is often advisable to represent personal names by other words which will suggest them, and which are more capable of association. Thus the words Chalk, Spendthrift, Shake, Mill, would suggest Chaucer, Spencer, Shakespeare, Milton, and they would be more easily associated together.

CHAPTER VIII.

PRESENTATION.

Things are remembered best according to the circumstances under which they are first presented before us. Thus arises a necessity for some law governing Presentation. Everything depends upon the first impression, and the conditions of mind essential to perfect impression are treated of elsewhere ; but in so far as a right presentation can effect the impression we will speak here.

Though our powers of retention are regarded as almost illimitable, yet our powers of acquirement are exceedingly limited, owing to the limited area of conscious activity.

We can receive perfectly but one impression at a time. We may, at times, receive impressions quickly, but they must come in single succession. If we attempt to enlarge the area of conscious activity by crowding several things before the mind at the same time, it will gain no distinct impression of either. This is because its force is weakened by being diffused and divided.

As the lens enables the photographer to secure a permanent impression, so does concentration act in like manner with the mental activities. The more these are

narrowed and focussed, the more perfect will be the conscious impression. Hence the Law of Presentation.

If the mind is so constituted as to receive more readily a smaller presentation than one larger and more extended, it becomes essential that every presentation we place before it should be made as small and concise as possible, in order to meet this peculiar law of mind. Therefore, when teaching, or in learning a series of ideas, numbers, or words, the series should be broken up into easily rememberable parts, and these assimilated in gradual succession ; but the matter should be so divided as to preserve in each part some recognizable affinity to the others by which their reconstruction may be readily accomplished.

In aiding a child, for instance, to spell a difficult word, the word should be so divided as to clearly mark out its difficulties, and the joining letters of the separate syllables or parts should be carefully pointed out in view of its reconstruction.

In dealing with words and numbers, the "Presentation," should never extend beyond three figures or three syllables, the attention being first directed to the middle one, the others on each side becoming familiar by comparison with it, these different groups being afterwards linked together by some observable peculiarity or affinity between the letters joining together each group.

Even numbers or formulæ may be easily assimilated to a certain extent, in this manner ; but when too numerous and extended, then apply the Rules of Sound in Chapter IV. By following this process of division and reconstruction, presenting to the mind matter in easily assimilative parts, may the greatest difficulties in memory work be overcome and almost impossible things accomplished. We give here, from p. 29 of our larger text book (where a full explanation of its meaning is given, but which is here unnecessary, as we are dealing only with difficult forms) the following Welsh word to be thus divided and reconstructed as indicated above :—

Llanfairpwll,gwyngyllgertro,bwllgerch
wyrn,byll,gogerbwll,llantysilio,gogogoch

We have divided the word into separate groups of three syllables to harmonize with preceding directions.

To learn this word as a whole by simply repeating it would be almost impossible, however many times it might be repeated ; but separate it into easily assimilative portions as follows, and by taking one syllable at a time and observing carefully the following directions, half the word will be learned in a few minutes :—

Llan fair pwll, gwyn gyll gertro, bwll gerch

wyru, byll goger bwll, llan tysilio, go go goch

Begin by comparing the first three syllables, carefully examining the form of each one, spelling each aloud, afterwards all together. The next three syllables all begin with G. Notice particularly their peculiar form and in what they differ from each other. Repeat audibly the middle syllable first, next the one on the left, then the one on the right. Then repeat them altogether and also along with the others from Llan to gertro, taking them also the opposite way.

Notice the affinity of the second letter in the third and fourth syllables. This will serve to link together the first group of three syllables to the second three.

Next notice the syllable following the G syllables, its likeness to the third syllable which precedes them. The one will cause you to remember the other. Then follows gerch, completing the half of the word. The remaining half may be learned on some other occasion, as for some to learn it all, would be unwise until their memory has been strengthened by training and discipline, though many will be able to learn it at once, if assimilated gradually, and dealt with in the same way.

The power to spell words, however difficult the words may be, will be easily acquired if this process of learning them be followed. As shewn, every difficult word should be broken up into syllables, or into such portions as clearly mark out its difficulties and shew the points upon which its correct spelling depends.

We have shewn elsewhere how concentrated attention is necessary to secure perfect impression, and here we see how this concentrativeness of memory should influence our methods of dealing with it. The circumscribed area of conscious activity necessitates a circumscribed form of presentation. Hence the general "Rule" given below, to be followed in all studies and with everything which is difficult to learn, be it a formula or a definition, a difficult passage or quotation, a scientific law or judicial enactment, or any other mental task.

Analytic and Synthetic Rule of Presentation.

Reduce the presentation by the use of suggestive or dependent parts, reconstructing the whole by the affinities observable in those parts.

This rule turns upon two things, and may be expressed in two words only:—

Division and Reconstruction.

But the way a thing is done is everything, and the rule alone shews us how this division and reconstruction are to be done to be effective. The rule just given, applies not only to the subjects before referred to, but also to literary composition, either poetry or prose, and to ideas generally. The Rule of Presentation in regard to ideas is carried out by the agency of root words. (See Chapters X, XI, XII.) Root words present to the mind in the narrowest compass all the essential elements by which their recollection is accomplished. The root words only, kept in mind, reproduce the ideas at will, as well as the language in which they are expressed.

The Rule of Presentation also operates in "Suggestive Contractions," by which a short series of words standing for important facts, may be represented by suggestive syllables, or other words or syllables sounding like them, and then strung together in a sentence easy to be remembered.

Numerous examples will be found throughout the book and in Chapter XIII.

CHAPTER IX.

CONDITIONS ESSENTIAL TO PERFECT IMPRESSION.

Presentation, as shewn in our last chapter, deals with the objective aspect of the question only—the arrangement and detail of what is presented, but the condition of the receiving medium must also be considered. As in photography, the impression largely depends upon the sensitive character of the plate, so mental impressions likewise necessitate a prepared condition of mind in order to be deep and permanent.

As this little work only professes to be a bare statement of the principles of the system—just sufficient to shew their general and everyday use, we are prevented from explaining the why and the wherefore of many things which are dealt with in the larger text book. That work, being essentially more theoretical, contains, amongst others, chapters upon the following subjects not absolutely necessary to the learning of the system. These have been omitted from thc present work in order to give more detail to the practical application of the principles to a variety of scientific, literary, and commercial subjects of greater interest to the general reader,

OPERATIONS OF MEMORY.
LAWS OF ASSOCIATION.
PRESENTATION AND CONCENTRATION.
CONCENTRATION AND CONTIGUITY.
PHYSICAL CULTIVATION OF MEMORY.
SUGGESTIVENESS OF MEMORY.
INTEREST AND MEMORY.
FACTS CONCERNING RECOLLECTION.
CONDITIONS ESSENTIAL TO RECOLLECTION.

In the first chapter mentioned, dealing with the operations and impressions of memory, are detailed the conditions essential to perfect impression, with which we have headed this chapter, but which we can only here refer to in the briefest manner possible.

Of the primary conditions of mind dealt with, three are specified as being essential to a perfect impression :—

1.—Direct conscious activity, or an aroused condition of consciousness.

2.—Equal and combined activity of all the mental powers.

3.—Concentration, or firm control and direction of the mind by the will.

The first shews that though we may, at times, receive impressions through the senses almost unconsciously, yet the reception of abstract ideas necessitates a lively condition of our mental activities. This is further exemplified in the chapter on the "Physical Culture of Memory," which treats of the best physical conditions under which memory operates, the best time of day for learning or recapitulating, with the habit and foods most necessary to preserve the brain in its fullest vigour.

Operations of memory greatly fatigue the brain, hence the ready activity of our recollective powers on awaking even from a short sleep. This fact should deter us from attempting to memorise anything except when in our best physical condition, and then only for brief periods of time. Mere recapitulation may be performed almost at any time, but to gather new impressions the brain should be fresh, alert and active as possible.

The second essential affords a strong argument in favour of scientific memory, which generally aims at bringing about a combination of the faculties in the reception of mental impressions. It is shewn that why dreams are generally so soon forgotten is owing to the fact that a portion only of our faculties are active during sleep. Many other facts are adduced to shew that the more numerous and general the faculties employed in

mental operations, the more durable and lasting will be the impression.

The third essential dealt with shews how mighty may become even our weakest faculties when directed by a strong will. This is also more extensively treated in the chapter on "Facts concerning Recollection," but in this connection it is shewn that its chief function in receiving impressions is to concentrate the power of the mind, and thus limit and circumscribe the area of conscious activity. By this, the light of consciousness is made to shine strong and clear, and the human mind receives what is presented before it in permanent and minutest detail.

CHAPTER X.

INTERROGATIVE ANALYSIS.

Thoughtful men in all ages, from Socrates downwards, have been conscious of the fact that Interrogation greatly strengthens mental impression,—that being questioned, or questioning ourselves, respecting anything we wish to remember causes the remembrance of it to be more definite and permanent.

This is not only due to the recurrence of the original impression brought about by the question, but also to the revival of the several elements of consciousness accompanying it. Interrogation wisely directed, serves to collect and unite these scattered elements in order to confirm and strengthen the original impression. We have shewn in our larger text book that recollection purely depends upon a recurrence of some of the conditions of consciousness accompanying, the first impression.

As interrogation necessitates reflection, and as reflection always tends to revive past impressions, it will be seen why Interrogative Analysis becomes a primary factor in inducing recollection, if rightly used.

The mnemonist, John Wallis, who first introduced this principle in the 17th century, directed that the student should ask himself twenty-two different questions respecting each fact or idea that he wished to remember. These questions will be found in Middleton's book and are very comprehensive. We have been experimenting some years with this principle in order to reduce it to some easy and definite rule of application. We have carefully analysed the twenty-two questions referred to and have eventually compressed them into three only.

These three questions comprise every essential element in Interrogative Analysis, and they can be remembered by three words only, which are as follows :

What ? How ? Why ?

The significance of these words we will now point out.

Every idea brought before us presents three points for enquiry :

1. The assertion or statement, embracing the truth, idea, action, or subject introduced.

2. Condition, or how, when, or where enacted, spoken, or evolved.

3. Causation or inference, why ? for what reason ? or to what end ?

These conditions answer to the three questions :

What ? How ? Why ?

One or two, sometimes the whole three of these interrogatives will apply to every root word, whether it be a noun or verb or adjective, and also to every Phraseological or relative suggester.

Every root idea, at least, should be analysed by these three questions ; but the questions must always centre round the root word. This must be the pivot upon which each question turns, the centre from which it originates.

Thus, take the following quotation from Secker as an example :

> "To store the memory with a sense of injuries is to fill that chest with rusty iron which was only made for refined gold."

The underlined word is the root word. Upon this we turn our first interrogation, the assertive What? To store what? "To store the memory."

Secondly, we use the conditional How? To store it how, in what way? "To store it with a sense of injuries."

Thirdly, we use the causative or inferential Why? Why should we, or why not? What is the inference? To do so would be "to fill that chest with rusty iron which was only made for refined gold."

Care must be taken to answer every question in the exact words of the clause or sentence under consideration, and not only should each be audibly uttered, but repeated in connection with the clause containing the root word.

Where a person is spoken of, the assertive What should be changed into Who.

If any reader will analyse the preceding quotation by these three interrogatives in the way we have indicated, he will be able to repeat it word for word with scarcely any difficulty after once or twice reading over.

Persons posessed of the feeblest memories may easily learn by heart either prose or poetry with little repetition if the ideas are analysed through the root words or suggesters in this manner.

Not only do these three interrogatives, What, How, Why, operate by the root word, but they also serve as a test to shew always which word of a sentence is to be used as the root word. This will be dealt with in the following chapter on Root Words and Suggesters.

Mere suggesters will seldom need more than the first interrogative What, if the connected sentences are carefully repeated as directed in the remarks on "Repetition" (Chap. XII). Take, for instance, the

suggestive words in the following lines from Southey :—

NIGHT.

How beautiful is night !
A dewy freshness fills the silent air,
No mist, no little cloud
Breaks the serene of heaven.
In full-orbed glory, the majestic moon
Rolls through the dark blue depths,
Around her steady ray
The desert circle spreads ;
Like the round ocean, girded by the sea,
How beautiful is night!

Take the first underlined word, "fills," which is really the root word of the whole piece, the others being purely Suggesters, and which answers the opening line, shewing how or why night is beautiful.

What fills ? "A dewy freshness fills." Fills what ? "The silent air." Take the second, "No." No what ? "No mist, no little cloud," etc. Take the third, "In." In what ? "In full-orbed glory the majestic moon, rolls," etc. Next, "around." Around what ? "Around her steady ray the desert circle spreads ; like the round ocean, girded by the sea."

Be careful to repeat audibly the connective sentences following each analysed phrase, as elsewhere directed. The above slight analysis by the first Interrogative only will enable anyone to repeat the lines from memory after a very brief perusal.

CHAPTER XI.

ROOT WORDS AND IDEAS.

We shall commence this chapter by defining the following terms :

1. A "Root Idea" is the first idea of any related series, and that from which the root word is selected.

2. "Relative Ideas" are those which follow the root idea, which spring from it or are suggested by it.

The language in which ideas are expressed is easily remembered by rightly using the "dependent" words upon which their phraseology turns.

These dependent words are of two kinds: "Root Words" and "Relative Suggesters."

The former are used to suggest the leading or root ideas, the latter to suggest the wording of the relative ideas following.

3. A "Root Word" is a word which readily suggests the language or phraseology in which an idea is expressed, through some observable connection with all its separate parts.

This connection is established by the three Interrogatives, What? How? Why? (See "Interrogative Analysis.")

4. A "Relative Suggester" is a word used to suggest the phraseology of a relative idea

Thus, a "Relative Suggester" is in some respects a root word; but to distinguish between the dependent words which stand for root ideas, and those suggesting the relative ideas; the latter are termed Suggesters because they merely suggest the wording of important sentences connected therewith.

The Root Word does more than this, for it not only holds together by the Analysis the several aspects of extended ideas, but it also holds to itself by observable affinities the relative ideas which follow it.

Thus, Suggesters, or prompters, are merely temporary aids used simply to acquire the wording of the matter, and should be discarded altogether as soon as the piece is learned ; but the root words are its permanent supports by which it may be perpetually kept in mind and easily reproduced whenever required.

Some do not require these intervening helps, but to all with feeble memory they are a necessity, as they form rests to sustain the mind and direct it from one point to another. They are also much more necessary in learning poetry than prose on account of the greater multiplicity of ideas which poetry contains.

How to recognize Root Ideas.

Our opening definition states that a root idea is the first idea of any related series. By the exercise in Comparative Analysis (Chap. VI.) the student will be always able to perceive when ideas are related to each other. It is not necessary to define the relationship, it is sufficient to perceive it. Where several connected ideas follow each other, the first is called the root idea because the others grow out of it or spring from it in some way. It is only necessary that they should have a successive relationship—the first to the second, the second to the third, and so on.

Before learning any piece of composition, carefully examine the first idea and see if it has any relationship or bearing upon the second idea. If it has, then examine the second idea to see if it has any connection with the third. If the first three ideas are clearly related to each other, mark them off into a series, and so bracket together each series of ideas having any relationship to each other. Thus, taking the first idea of each series, these become the root ideas of the piece. These root ideas, thoroughly learned, will control and ensure the

recollection of the whole if the connection is sufficiently clear.

How are the Root Ideas to be learned?

This is accomplished by the use of root words governed by the "Interrogative Analysis" taught in the last chapter. The language in which these root ideas are expressed can be learned without difficulty and with very little repetition if the root words are wisely used.

Our opening definition states that a root word readily suggests the language in which an idea is expressed through some observable connection with all its separate parts.

The clear understanding of this definition all turns upon that underlined word "through."

A root word is not merely a suggestive word, but a word upon which the whole expression of the idea depends; the foundation stone upon which the verbal structure is built. A noun may be the most suggestive word to recall an idea, but the verb has most to do with its structure, and will therefore often prove the most effective root word. Hence, a root word is that upon which the idea is built, and to which all other words in the passage or sentence are mere auxiliaries used to express the idea more fully and clearly.

How to test Root Words.

The best and most proper test of a root word is by the three words of the Interrogative Analysis—What? How? Why? It is by these that the observable connection referred to in our definition is established. Will these words apply to it? Take the first idea from the first of the examples in the following chapter on "Mercy," the root word of which is "strained," and apply one or more of these interrogatives. What is not strained? "The quality of mercy is not strained." How or Why? Because "it droppeth as the gentle rain from heaven upon the earth beneath." The above is an isolated idea, though it is not followed by a full-stop.

The next root idea expresses the blessedness of mercy,

and it is followed by two relative ideas, referring to its power and dignity. We again apply these Interrogatives to the second root word "Blessed." What is blessed? "It [mercy] is blessed." How is it blessed? "It is twice blessed." Why? It blesseth him that gives and him that takes." Hence its power and also its dignity. The Inferential Interrogative—"Why" always leads on to the relative idea.

The third root word is "sceptre." In this case, the noun being closely linked with the verb is preferred, and answers quite as well. Thus—what of the sceptre? The sceptre shows something. Shows what? "Shows the force of temporal power."

"But" is not a root word, and is only emphasized to show its importance as connecting the two aspects of this extended comparison originating in the word "sceptre."

The last is "therefore." "Therefore, Jew." Therefore, what? "Though justice be thy plea, consider this," etc.

Is the Root Word invariably the same?

The root word selected by different persons may not always be the same word, as a noun may be sometimes used when closely connected with the verb on account of its greater suggestiveness; but the test we have given will always prove its sufficiency. Does it answer to these questions? Do these bring together every part of the idea into connection with it? Unless an obvious connection can be immediately established between the root word and every part of the idea, another word must be selected.

By a little practice, the judgment will become so trained as to rarely miss the proper root word; but should any doubt exist in the choice of words, always select that which answers best the requirements referred to.

The following beautiful lines from the *Century Magazine* were once adduced by a critic to show that the principles could not apply to all kinds of composition;

but, of course, this will largely depend upon the tact and resourcefulness of the student and the power of adaptation which he or she possosses:—

> Brother and sister are they:
> Out of the golden yesterday,
> Through the dusty now, and the dim to-morrow:
> Hand in hand, go joy and sorrow.

At first sight, it would appear to be very difficult to apply the principle of root words to these lines, and some would doubtless give it up at once as impossible; but if the reader has so little perseverance he can hope for little benefit from any principle, however valuable. The same difficulties would present themselves in a hundred different forms of literary composition; and these difficulties can only be met by a searching analysis for the dependent word in every case. The root word once found, will draw to itself, by the analysis, every part of the idea.

Thus, the root word of the lines just quoted will be found in "they," the last word of the first line. The reader only needs to apply his Analysis to prove it. Thus—what are they? "Brother and sister are they." How or why? The answer or reason lies in their inseparableness of past, present, and future, expressed in the words "yesterday, now, to-morrow." These three periods are described by the terms "golden," "dusty," and "dim." "Out" and "through" are their corresponding verbs. Thus—"Out of the golden yesterday." The word "out" following the root word, will easily bring the whole succession to mind with every particular of the phraseology in which they are expressed.

Of course, every rule has its exceptions; but very many which appear to be such will be found to yield to careful application.

CHAPTER XII.

INTERROGATIVE SYNTHESIS.

How to use Root Words.

It will be seen that the Interrogative Analysis establishes a connection between the root word of an idea and all its separate parts. The same three questions we also use in rebuilding the verbal structure in our own individual minds. By these, we gather up its extended clauses and sentences and bring them into connection with each other through the root word. They form the radiating links by which every part is held to its centre and the root word is the central suggestive medium by which every clause and sentence is afterwards brought to mind. Therefore, these three Interrogatives, What? How? Why? should be in constant use when analysing ideas and building together again their separate parts around the root word. This reconstruction must be continued until the root word shall not only recall the root idea, but this shall also recall every subsequent idea having any relation to it.

Repetition.

Though the purpose of this principle is to minimise the need of repetition, yet a certain amount of repetition is always necessary for the following reason, and this should always be done audibly, or aloud if possible. Articulate utterances have equal, and in some cases greater, effects upon the human brain than mental impressions, and words once articulated in any set form most naturally assume that form ever afterwards through the "law of Verbal Cohesion." Therefore, before repeating any clause or sentence, be careful to mark well its form, the order of each word, and, above all, the dependent word upon which its phraseology turns.

In poetry or eloquent perorations where rhetorical figures or successive comparisons rapidly follow each other, as in the essay of Macaulay at the end of this chapter. These should be carefully observed, their succession and order marked in the student's mind as we have numbered them in the example referred to. This is very necessary in certain styles of composition such as the essay in question.

When the first or root idea of any series has been acquired, and can be repeated along with the root word, then proceed to examine the ideas which follow it. Their connection and relation to the root idea and to each other must be carefully observed. The sequence and relationship of these ideas will cause them to suggest each other afterwards, and in addition, a "Relative Suggester" may be used to recall the primary sentence of each relative idea.

Isolated Ideas.

Ideas having no connection with previous or subsequent ideas must be remembered by a separate root word; but, on the other hand, if any succession of relative ideas extend too far, they should be divided into two series, and an additional root word employed.

In the following examples, the relative ideas are indicated by a slight dash under each Suggester, the root words having a thick line underneath. Each sentence or idea connected with a Suggester must be analysed if necessary—at least it must be repeated twice or thrice until the suggestive word readily recalls its phraseology and then repeated along with the preceding sentences from that containing the root word. The three examples following represent the three most ordinary forms of literary composition. The first is a specimen of "blank verse" from the "Merchant of Venice," this being the most difficult form of composition to learn by heart.

Comic Writings.

In dealing with humourous writings or any exceptional examples of difficult composition where extended

ideas or comparisons entail a continuous succession of difficult phrases or sentences hard to remember. In all such cases, apply the "Rule of Presentation" given in Chap. VIII., dividing them first into easily assimilated portions, then connecting them, and repeating them together, afterwards according to the above rule.

Three Examples of Exercises in Root Words and Suggesters.

—

MERCY.

Strained The quality of mercy is not strained,
It droppeth as the gentle rain from heaven
Blessed Upon the earth beneath ; it is twice blessed;
It blesseth him that gives, and him that takes,
'Tis mightiest in the mightiest ; it becomes
The throned monarch better than his crown,
Sceptre His sceptre shows the force of temporal power
The attribute (aid) to awe and majesty,
Wherein doth sit the dread and fear of kings :
But mercy is above this sceptred sway,
It is enthroned in the hearts of kings ;
It is an attribute to God Himself ;
And earthly power doth then show likest God's
Therefore When mercy seasons justice. Therefore, Jew,
Though justice be thy plea. Consider this :
That, in the course of justice, none of us
Should see salvation : we do pray for mercy;
And that same prayer doth teach us all to
The deeds of mercy. [render

Shakespeare.

The above exercise is analysed on pages 33 *and* 34.

THE CHARACTER OF QUEEN VICTORIA.

Copied from the "Times" of Wednesday, January 23rd, 1901.

No words can express the general grief, the universal sense of national and personal bereavement awakened by the event which it is our melancholy duty to chronicle to-day. For nearly sixty-four years Queen Victoria has watched, at first with conscientious diffidence, later with ever-maturing experience, over every development of our national policy and destiny. Through that long period she has commanded the esteem of those who direct the affairs of the world, and has also won the affection and confidence of that vast majority whose judgment could only be formed upon general and external indications of character. Only a rare combination of sweetness and strength, only a subtle blending of the highest qualities of head and heart could have achieved this double success.

This generation can never know, save in the most general and imperfect way, the extent of the beneficent influence wielded by the Queen, at once over the great ones and over the lowly ones of the earth. The condition of Europe when she ascended the throne was one of extreme instability. A few years later, it became one of turmoil and confusion, in which dynasties were overthrown, and high potentates had to seek asylum where they could. That the British Throne came through that troublous time, not only unscathed but with added prestige and security, must be held due in no small measure to the character of its occupant.

Our own country did not escape the infection of the ideas which convulsed the Continent, nor was it exempt from the grave social evils which formed a legitimate ground of complaint. But, if we have had orderly evolution where other nations have gone through devastating internal conflict, if the monarchy held its own while new buttresses were being built for its support, and if it now stands, not only broadly

based upon the people's will, but strong in the affections of kindred nations over the sea, we owe these results in a great degree to the womanly sweetness, the gentle sagacity, the utter disinterestedness, and the unassailable rectitude of the Queen.

The nation owes her much more, for she has not only been loyal to it and to the constitution, but equally faithful to the claims of her own position. Though always scrupulously careful not to overstep the limits marked out for her by the constitution, the Queen never forgot the rights and the duties that the constitution confers and imposes. She always played her part in Government as the chief magistrate of the nation, and knew how, when occasion demanded, to assert the rights of the Throne against a too autocratic Minister.

We have also to thank the Queen for an influence of most potent kind, consistently and vigorously used to enforce high ideals of social and personal virtue, of religious faith and of the Christian life. Her own life was by choice, and as far as the necessities of her position would permit, one of almost austere simplicity and homeliness. Her Court has been absolutely unsullied by the vices which had come to be regarded as the inseparable concomitants of Courts, and if society at large has not yet reached her standard, it cannot plead the want of a shining example.

MACAULAY'S ESSAY ON JOHN BUNYAN.

We give the latter half as being the more abstract and difficult.

ONLY. Bunyan is almost the only writer that ever gave to the abstract the interest of the concrete. In the works of many celebrated authors men are mere personifications. We have not an Othello, but jealousy (1); not an Iago, but perfidy (2); not a Brutus, but patriotism (3). The mind of

CONTRARY
is the word connecting the two aspects of the comparison.

Bunyan on the contrary, was so imaginative, that personifications, when he dealt with them, became men. A dialogue between two qualities in his dream has more dramatic effect than a dialogue between two human beings in most plays.

DELIGHTFUL

The style of Bunyan is delightful to every reader, and invaluable as a study to every person who wishes to obtain a wide command over the English language. The vocabulary is the vocabulary of the common people. There is not an expression, if we except a few technical terms of theology, which would puzzle the rudest peasant. We have observed several pages which do not contain a single word of more than two syllables. Yet no writer has said more exactly what he meant to say. For magnificence (1), for pathos (2), for vehement exhortation (3), for subtle disquisition (4): for every purpose of the poet (1), the orator (2), and the divine (3), this homely dialect, the dialect of plain working men, was perfectly sufficient.

YET
is not a root word, but is emphasized to shew its importance, connecting the two aspects of this extended comparison.

BOOK.

There is no book in our literature on which we would so readily stake the fame of the old unpolluted English language; no book which shews so well how rich that language is in its own proper wealth, and how little it has been improved by all that it has borrowed.

COWPER.

Cowper said sixty years ago that he dared not name John Bunyan in his verse for fear of moving a sneer. We live in better times,

MANY AND TWO form this last comparison.

and we are not afraid to say that though there were many clever men in England during the latter half of the seventeenth century, there were only two great creative minds. One of these produced the "Paradise Lost," the other the "Pilgrim's Progress."

It will be seen that we have numbered the succsssive points in every comparison or contrast, that their order and sequence may be the more particularly observed.

CHAPTER XIII.

HOW TO REMEMBER THE ROOT WORDS.

If each word is written in the margin of the page opposite the line in which it occurs, the law of Contiguity acting through the visual memory will generally recall the words without any other assistance, if only few in number. Should, however, the reader's visual memory not be strong, then he may connect them by "Suggestive Contraction" referred to at the end of the chapter on presentation. If the number of the words are considerable, such as would be used to recall the ideas of a sermon or lecture, then they should either be correlated to the key words in consecutive order; or they should be learnt by Analysis and Correlation, as shewn in Chapters VI. and VII.

Thus we have three separate methods of dealing with the root words when marginal insertions are not sufficient to recall them:

1. They may be correlated to the key words in their required order.
2. They may be connected in the mind by Analysis and Correlation.
3. They may be represented by Suggestive Contractions.

The last-mentioned method is the best for short articles, essays, and poetical pieces where the root words do not exceed a certain number.

The three following examples of Suggestive Contractions suggest the root words of the three "Exercises" shewn in the preceding chapter:

"MERCY."

Root words strained, blessed, sceptre, therefore
Suggestive sentence—strange, blessed, sceptres, there

QUEEN VICTORIA.

Root words express, watched, generation, escape, owes, thanks
Suggestive sentence—Expressive watchwords generations escape, owning thanks

MACAULAY'S ESSAY.

Root words only, delightful, book, Cowper
Suggestive sentence—Only delightful book (of) Cowper's

It will be seen that conjunctions, prepositions, etc., are introduced in order to join the words together so as to form a sentence expressing some thought or idea as far as possible. By this the words are held together in their proper order, and little effort is required to remember them.

CHAPTER XIV.

PRIMARY USES AND PURPOSES OF THE "KEY."

In addition to suggesting numbers, the "Key" on the following page answers all the purposes of an ordinary Nomenclature Table, and though these form no essential part of the system, yet we include one constructed upon these unique principles of Sound for the benefit of the many students who prefer to use them for such special purposes as are indicated below. For other uses, see General Applications.

Suggestion of Numbers.

To suggest number words when the Student's Glossary is not at hand. Should the key word of any number be found unsuitable to the nature of the association then required, its articulation will immediately suggest other words from the "Glossary" sounding like it, and expressing the same number but conveying different and more suitable ideas.

Examinations.

To enable the student to classify, previous to an examination, any collection of facts in the exact order in which he will be likely to require them, by correlating or otherwise associating each one to a separate key word in consecutive order. See classified events on page 46.

Mental Reporting of Sermons or Addresses.

To fix in mind the principal ideas, opinions, arguments, and illustrations of an address by rapidly connecting with the key words in consecutive order, striking words used by the speaker, likely to suggest them when afterwards called to mind by the aid of the key. It is preferable to use the speaker's own words; but if others more suggestive of the ideas present themselves, they should be used instead.

Extemporaneous Speaking.

To enable a teacher, public speaker, or debater to rapidly arrange a series of illustrations, ideas, arguments, or points of criticism, by associating each with a key word in the exact order in which he desires to recollect them.

The key cannot be used successfully for the above purposes until it has been thoroughly mastered, and can be repeated either forward or backward without mental effort.

How the Key should be Learned.

The key should be learned by Comparison only, and assimilated to the natural memory by gradual and constant use. No number under 100 should ever be mentioned or thought of without its corresponding key word being also remembered or looked at. For this purpose it is advantageous to carry a copy in the pocket, so that it can always be consulted should any number word fail to come to mind. For young people and others who prefer to learn it by heart, it is best to learn only a column at a time, and it is so constructed as to be easily learned if the sounds and numbers are compared and the image presented by each word reflected upon.

ALLITERATIVE KEY.

1	11	21	31	41	51	61	71	81	91
Can	Cannon	Teuton	Tea-bun	Foreman	Firebrand	Fiction	Freshman	Pitman	Infant
2	12	22	32	42	52	62	72	82	92
Cook	Canoe	Two-shoes	Tea-spoon	Fortune	Fire-proof	Fixture	Festoon	Pot-hook	Hindoo
3	13	23	33	43	53	63	73	83	93
Key	Candy	Tureen	Tepee	Firtree	Fire-screc	Fig-tree	Fish-spear	Patty	Intrigue
4	14	24	34	44	54	64	74	84	94
Cur	Conger	Tutor	Tea-urn	Farmer	Friar	Figure	Fisher	Potter	Ink-horn
5	15	25	35	45	55	65	75	85	95
Kite	Convoy	Tool-wright	Trefoil	Forelight	Firefly	Fig-pie	Fish-wife	Pot-boy	Invoice
6	16	26	36	46	56	66	76	86	96
Cock	Convict	Tunic	Tree-frog	Forclock	Firclock	Fig-box	Physic	Patrick	Index
7	17	27	37	47	57	67	77	87	97
Cuff	Compass	Tourist	Treatise	Forest	Fire-brush	Flag-staff	Fastness	Patmos	Indus
8	18	28	38	48	58	68	78	88	98
Cot	Comet	Toothache	Tea-pot	Ferret	Firegrate	Frigate	Flasket	Pottage	Inmate
9	19	29	39	49	59	69	79	89	99
Kine	Convent	Tooth-ring	Tea-things	Farthing	Filing	Fig-wine	Fish-tin	Patten	Engine
10	20	30	40	50	60	70	80	90	100
Congo	Crusoe	Tea-rose	Turncoat	Fly-boat	Fox-hole	Fresco	Flat-pole	Pinfold	Unyoro

The above is not a key in the ordinary Mnemonical sense of the term. one being shewn on page 8, It is only a key in the sense that it suggests something. Its primary purpose is to suggest number words to students when the Glossary is not at hand. Thus, its more appropriate title would be a Suggester: but "Key" being shorter and much more familiar in works on memory, is our reason for still using the term,

Not only does every word express its own number, but in most columns the sound of the first syllable is identical with the first sound of the number. The columns from forty all begin with "f" until eighty is reached. This column takes the sound of "p." which is suggested by the last syllable of the preceding column. So, the last word of the eighty column suggests the initial sound of the last column.

SECTION OF SOUTH AFRICAN WAR CALENDAR, 1899.

This shews how any series of facts or events may be recollected in consecutive order by associating them with the key words. In this way many students remember the Sovereigns of England, Presidents of the United States, Problems of Euclid, and other facts dealt with in some of the supplementary papers. If the key is well known, the recollection of the key words will bring to mind the events associated with them in their due order.

It is not necessary to always bring the key word itself into the association, the slightest reference to it will suffice, as shewn in associations 3, 5, 8, 9, etc.

Date	Event	Key Connection	Key Word
Oct. 10	Boer ultimatum received by British Government	ultimatum from a can unrolled	can
,, 12	Boer troops first enter Natal	uncooked boars come through	cook
,, 13	Armoured train wrecked at Kraipan, near Mafeking	they locked the front wheels	key
,, 20	Battle of Glencoe and squadron of Hussars taken prisoners	through a cursed glen few go	cur
,, 21	Battle of Elandslaagte, in which Highlanders suffer severely	Higland colours flying soon won	kite
,, 22	Yule begins his retreat by night marches to Ladysmith	cocks crow on Yule's route	cock
,, 23	Boers enter Dundee and General Symons dies	Dundeeans kicked and cuffed become gloomy	cuff
,, 24	Battle of Reitfontein, fought by French to Cover Yule's retreat	font, suggests baby, water and ewer	cot
,, 26	General Yule arrives safely at Ladysmith	ox-trains come safely through Yule's tact	kine
,, 30	Two battalions lost and battery by stampede of mules at Nicholson's neck	battalions conquered when mules elope	Congo
Nov. 1	Free State Boers first enter Cape Colony	with cannon the Free Staters come	cannon
,, 2	Ladysmith invested and telegraph wires cut	Ladysmith cut off by land and water too	canoe

The last syllables in each association give the date; the words underlined shew the connection with the key word.
The events in October were coupled with the first column of key words; events in November with the second column, etc., but after January, 1900, the month was indicated by the association commencing with its initial letters.

CHAPTER XV.

METHODS OF APPLICATION.

The fact we desire to remember should be associated or correlated to something already known in connection with it. Thus we fail to remember a person's name. Yet we may know well his features and complexion, his profession, and where he resides. Therefore we take the best known or most prominent element of his personality and connect it with a word suggesting his name.

A mere association will often suffice for the present, but the two may be correlated together afterwards.

Thus, suppose a gentleman's name is Southwell, and the only striking thing which you can think of respecting him is some quality of his character, viz. : his integrity and uprightness. You therefore correlate thus :—

straight, all-round, equatorial circle, Southern hemisphere—Southwell

The "best known" fact about another person is that he is a doctor, and you wish to rember that his name is Jackson. You correlate thus .—

healing, restoring, building up, house that Jack built—Jackson

The "best known" fact about another person is that he is a solicitor, and you keep forgetting that his name is Harding. You therefore correlate thus :—

legal, bonds, chains, oval iron rings, hard ring—Harding

Numerical Apllications.

A word may often express not only a number but a fact as well ; and in this lies another advantage of representing figures by words instead of single arbitrary letters.

Thus suppose it is desirable to remember the date of a letter received on February 23rd. The word "fury"

would not only give the date or number 23, but by its initial letter "F," it would also suggest the month. This double use of words will be further illustrated through the following pages in connection with various subjects.

When it is desirable to remember any numerical fact, such as the position or distance of a place, the weight of a metal, the motion of a body, the height of a mountain, the length of a river, or the date of an event, the figures must be first translated into words and then associated with the fact by an idea as striking as possible. The exact form of this association may vary much with the subject. In some cases, the two may be correlated together as above, but where several factors have to be dealt with, as in Dates of Historical Events, etc., correlations are not generally advisable, as they enlarge the presentation when too extended.

This is why we have seldom used a correlation in the Historical Events occupying the next ten pages. It is best to conform to the Law of Presentation by reducing the date and the event, each to their smallest forms and adding a connecting idea when necessary. But whether the connecting idea be expressed in the number word or not, the sentence should be so formed as to depend entirely upon the word or words expressing the number which should therefore form the root word of the idea.

This will obviate any necessity for remembering the exact order of the words except in a few special cases.

By this method, each sense influencing memory is provided with something to lay hold of and by which it may strengthen itself in each fact it deals with.

Verbal cohesion is provided for by the tongue having something to articulate; also the ear has something to hear, the eye to see, the mind to reflect upon. Thus are the processes of verbal and mental assimilation combined, while each separate faculty exerts its influence in forming and deepening the impression.

In making associations, the element most essential is conciseness. The Law of Presentation demands

this. The mental pictures of the "Old Mnemonics" are in no way necessary to memory if the associations are sufficiently concise. If a mental picture or extended thought is utilized, it should be made to turn upon two or three words only. Such phrases, memory can assimilate easily and recollect by verbal cohesion alone after once or twice repeating.

To remember each of the following events, two words only are necessary—the one suggesting the event, the other the number.

These are placed in the middle column and thus form the Presentation.

The connecting ideas will come of themselves, or may be often dispensed with altogether in the case of young people, but to adults they are more essential.

Therefore, the middle column is the all-important, because it contains the two essentials forming the Presentation, and these suggest both date and event.

Sometimes the Association is embodied in the Presentation. This is generally necessary where a considerable number of figures have to be dealt with as in the Populations, Distances, etc., shewn further on.

END OF PART I.

dealing with Principles.

PART II.

consists of Examples of Application, beginning with Historical Dates on the following page.

The middle column forms the Presentation which consists of the word suggesting the event, which may be called the root word ; and also the number words which give the date. The root word is separated from the number word by a hyphen.

(See concluding paragraphs in preceding chapter before reading.)

Event		Date	Presentation, comprising Root Word and Number Word	Connecting Idea or Association
ROMAN PERIOD.				
Julius Cæsar lands in Britain	B.C.	55	Cæsar—high tide 5 5	he landed at high tide
Return of Romans under Claudius	A.D.	43	Claudius—hurry 4 3	they returned in no hurry
Caractacus carried in chains to Rome		51	Caractacus—lion 5 1	chained like a lion, or was bold as a lion
Death of Boadicea		61	Boadicea—action 6 1	Boadicea's brave action
St. Paul beheaded at Rome		67	St. Paul—exist 6 7	ceased to exist
Jerusalem destroyed by Titus ...		70	Titus—last stone 7 0	pulled down the Temple's last stone
Agricola sails round Britain ...		84	Agricola—greater 8 4	was greater for his enterprise
Hadrian completes his wall		121	Hadrian—conclusion 1 2 1	brings his work to a conclusion
Didius Julian purchases the Roman Empire		193	Julian—ran empty 1 9 3	his purse ran empty
Death of Severus at York		211	Severus—soon undone 2 1 1	
Council of Arles		314	Arles—three gone there 3 1 4	attended by three British Bishops

London taken and sacked by the Scots	367	Scots—detective 3 6 7	Scotland Yard
The Romans finally leave Britain ...	410	Romans—are gone home 4 1 0	
St. Patrick first preaches in Ireland	432	Patrick—fortitude 4 3 2	he needed great fortitude
SAXON PERIOD.			
The Saxons land in Britain	449	Saxons—murmuring 4 4 9	or for land were murmuring
The Latin language ceases to be spoken in Italy	580	Latin—boys make known 5 8 0	their aversion to Latin Italian boys make known
Augustine's mission to England ...	597	Augustine—gliding past 5 9 7	his monks in procession
Flight of Mahomet from Mecca ...	622	Mahomet—legs soon flew 6 2 2	on legs soon flew
Library at Alexandria burned ...	640	Library—big barrow 6 4 0	burned more books than would fill a
The Saracens overrun Spain ...	715	Saracens—peasants fly 7 1 5	made Spanish peasants fly
Union of Saxon kingdoms under Egbert	827	Egbert's state grew fast 8 2 7	
Accession of Alfred the Great ...	871	Alfred's great wisdom 8 7 1	
Charlemagne, Emperor of the West	787	Charlemange—crustaceous 7 8 7	was rather crustaceous
University of Oxford founded ...	886	Oxford—a stray ox 8 8 6	where drowns a stray ox
University of Cambridge founded ...	915	Cambridge—in one night 9 1 5	came not in one night

In the following dates the thousand must always be added, the last three figures only being indicated by the association.

EVENTS SINCE THE NORMAN CONQUEST.

Event.	Date	Presentation, suggesting Event and Date	Connecting Idea or Association
The first Crusade	A.D. 1096	Crusades—infect 9 6	
Paper first made from rags	1100	Paper, from old clothes 1 0 0	
The Emperor Frederick excommunicated	1158	Frederick—contrite yet 1 5 8	not contrite yet
The Cardinals begin to choose the Popes	1160	Cardinals—one big Pope 1 6 0	choose one big Pipe
Thomas à Becket murdered	1171	Becket—compassion 1 7 1	murdered without
Henry II. does penance at Becket's tomb	1174	Becket's tomb, one is there 1 7 4	
Inquisition established at Rome ...	1204	Inquisitors, blue robes wore 2 0 4	
Magna Charta signed...	1215	Charta—new won prize 2 1 5	was a new won prize
Title of Prince of Wales first made	1284	A Wales, newspaper 2 8 4	long before they print a
Marco Polo writes his travels ...	1289	Marco's book written 2 8 9	
Mariners' compass invented ...	1302	Compass--the boat through 3 0 2	a compass guides
Death of Dante	1316	Dante—Pedantic 3 1 6	not pedantic
Gunpowder invented	1340	Gunpowder—wheelbarrow 3 4 0	useful as a wheelbarrow

Death of Chaucer	1400	Chaucer goes home 4 0 0	
Lollard burnt at Cologne	1351	Lollard, defiant 3 5 1	
Shaving the beard begins in England	1357	Shaving—decisive 3 5 7	to shave a man must be decisive
Windsor Castle built	1364	Castle—erect there 3 6 4	a castle we erect there
Wat Tyler's rebellion...	1381	Wat Tyler—relation 2 8 1	leads his relations
Wycliffe translates the Bible into English	1384	Wycliffe—the better 3 8 4	left the Bible the better
Bombshells invented	1388	A bomb a teapot hit 3 8 8	
Battle of Cressey, and cannon first used	1346	Cresses—we dare pick 3 4 6	by a cannon we dare pick
Jerome burned at Constance ...	1416	Jerome burned on sticks 4 1 6	
Execution of Lord Cobham	1417	Cobham's sermon's last 4 1 7	
Joan of Arc burnt	1431	Joan—for treason 4 3 1	not burned for treason
James I. of Scotland assassinated ...	1437	James—hurry past 4 3 7	James' murderers
Art of Printing invented	1440	Printing, art first known 4 4 0	
Battle of Wakefield (Wars of the Roses	1460	A field—burdock grows 4 6 0	in a field where burdock grows
Michael Angelo, the sculptor, born	1474	Angelo—choristers 4 7 4	Angelo carved the choristers
Watches first made	1477	Watches—were massive 4 7 7	at first were massive

Event	Date	Presentation suggesting Event and Date	Connecting Idea or Association
Duke of Clarence drowned in a butt of wine	1478	Clarence—largest butt 4 7 8	drowned in the largest butt
Raphael, the painter, born	1483	Raphael—born painted 4 8 3	not born painted
Columbus discovered America ...	1492	A merry car in view 4 9 2	
Luther begins the Reformation ...	1517	Luther a lion was 5 1 7	
Soap first made in England	1524	Soap—wide ewer 5 2 4	soap and a wide ewer
Dissolution of the Monastries ...	1539	Monks—while eating 5 3 9	plundered while eating
Pins first used instead of skewers ...	1543	Skewers—ivory 5 4 3	some made of ivory
The Council of Trent	1546	Trent—mitres mix 5 4 6	at Trent many mitres mix
Beer 6d. per cask, and bread four loaves for a penny	1547	Beer—boisterous 5 4 7	beer made them
The Liturgy composed and read in churches	1548	Liturgy—boys parrot 5 4 8	sometimes boys parrot
Stockings first knit in England ...	1561	Stockings—nice legs run 5 6 1	make nice legs run
Starching linen first taught in England	1564	Linen—twice thicker 5 6 4	makes linen twice thicker
Shakespeare born	1564	Shakespeare—nice actor 5 6 4	that nice actor
Pope Pius excommunicates Queen Elizabeth	1570	Elizabeth—pious pope 5 7 0	and a pious pope

Massacre of St. Bartholomew ...	1572	Masses—lifeless grew 5 7 2	
Drake sailed round the world ...	1577	Drake's—righteousness 5 7 7	went round the world
Destruction of the Armada	1588	Armada—pilot's hat 5 8 8	carried many a pilot's hat
Execution of Mary, Queen of Scots	1587	Mary—quietness 5 8 7	suffered in quietness
Translation of the Bible commenced	1604	Bible—kicked over 6 0 4	the old Bible kicked over
Gunpowder plot discovered	1605	Fawkes—crocodile 6 0 5	cruel as a crocodile
Book of Sports ordered to be read in churches	1617	Sport—accomplished 6 1 7	sport in church accomplished
Barometer invented by Torricelli ...	1626	Torry chilly—begs two sticks 6 2 6	
Circulation of the blood discovered by Harvey	1628	Harvey, speculates 6 2 8	
Uniformity Act passed	1662	Uniformity—picnics few 6 6 2	made many pastors picnics few
The plague in London...	1665	Plague—recognize 6 6 5	the plague we recognize
Great fire in London	1666	Fire—crack, crack, crack 6 6 6	fire goes crack, etc.
Death of Milton	1674	Milton—successor 6 7 4	left no successor
Bank of England founded	1694	Bank—rocking chair 6 9 4	as old as grandmother's rocking [chair
Eddystone Lighthouse blown down	1703	Ed-dystone see 7 0 3	
Gibraltar taken by the English ...	1704	Gibraltar—pass over 7 0 4	to Gibraltar we pass over

Event	Date	Presentation suggesting Event and Date	Connecting Idea or Association
Pianofortes invented ... A.D.	1710	Piano—lessons go 7 1 0	
Sir Christopher Wren dies (the Architect of St. Paul's)	1723	Wren's—last duty 7 2 3	
Sir Isaac Newton dies	1728	Newton—is new yet 7 2 8	
Methodism founded by John Wesley	1739	Methodism—pestilence 7 3 9	first regarded as a
British Museum established... ...	1753	Museum—best sights see 7 5 3	where we best sights see
Sewing Machines invented	1755	Machines—housewives buy 7 5 5	
Earthquake at Lisbon...	1755	Lisbon—lost by night 7 5 5	
Handel, the Composer, dies	1759	Handel is dying 7 5 9	
Poland is dismembered	1772	Poland has lost rule 7 7 2	
First Life Assurance Society ...	1772	Premiums—Christmas due 7 7 2	at Christmas due
First American Congress	1774	Congress—trespasser 7 7 4	regarded as a trespasser amongst nations
Haydn produces the "Creation" ...	1778	Haydn—has his day 7 7 8	
Captain Cook killed on his third voyage	1779	Cook—assassin 7 7 9	killed by a savage assassin
First Sunday School opened by Robert Raikes	1781	Raikes—has raised one 7 8 1	

Dr. Johnson dies	1784	Johnson—his maker 7 8 4	meets his maker
Cartwright invents the power-loom	1784	Cartwright—dressmaker 7 8 4	rights the dressmakers
First Steamboat by Symmington ...	1788	Steamboat—rivets made 7 8 8	
French Revolution begins	1789	Revolution—mistaking 7 8 9	there was no mistaking
Mozart dies	1792	Mozart—is entombed 7 9 2	
Louis XVI., King of France, guillotined...	1793	Louis—ascended 7 9 3	the guillotine ascended
Burns, the Scotch poet, dies ...	1796	Burns—coffin fixed 7 9 6	in his coffin fixed
Bank of England stopped payment...	1797	Bank suspends cash 7 9 7	
Battle of the Nile	1798	Nile—washing day 7 9 8	fought on a washing day
Legislative Union of England and Ireland	1801	Ireland—got lonesome 8 0 1	
Steel Pens first made	1803	Pens, not so cheap 8 0 3	
Death of Nelson	1805	Nelson—great foe dies 8 0 5	the Frenchman's great foe
Retreat and death of Sir John Moore	1809	Sir John—lay moaning 8 0 9	on Corrunna's shore
Marriage of Napoleon...	1810	Napoleon—button hole 8 1 0	married with a flower in his button-hole
Stephenson makes his first locomotive	1814	Locomotive—stationer 8 1 4	first shown by a stationer
Battle of Waterloo	1815	Waterloo—Whitsuntide 8 1 5	fought about Whitsuntide

Event		Presentation suggesting Event and Date	Connecting Idea or Association
Queen Victoria born	A.D. 1819	Victoria's reign coming 8 1 9	
Death of Queen Caroline	1821	Caroline—petulant 8 2 1	never petulant
First Railway opened	1830	rail the road 8 3 0	
First Reform Bill passed	1832	Reform Bill—latitude 8 3 2	it gave the people more latitude
Slavery abolished	1833	Slavery—strategy 8 3 3	abolished after much strategy
Penny post established	1840	Penny letters go 8 4 0	
Birth of Edward VII.	1841	King—utterance 8 4 1	the King's first utterance
Ross's great telescope completed ...	1844	Telescope—flatterer 8 4 4	brought him many a flatterer
Franklin's last voyage in the Erebus and Terror	1844	Franklin—a terror 8 4 4	he sailed in a "Terror"
Corn Laws repealed	1846	Repeal—chatterbox 8 4 6	repeal, started many a chatter-box
Famine in Ireland	1847	Famine—bitterness 8 4 7	in all its bitterness
Chloroform first used	1847½	[Chloroform—pain arrests 8 4 7	
The Chartist Riots	1841	Chartists—Saturday 8 4 8	riot having no wages on a
Gold discovered in Australia ...	1851	Gold—lame boy run 8 5 1	made many a lame boy
Russian War begins	1854	Russia—gets nigher 8 5 4	

Indian Mutiny	1857	Mutes—they fight us 8 5 7	
The "Great Eastern" built ...	1857	a great size was 8 5 7	
American Civil War begins	1861	Merry war—a fiction 8 6 1	is a fiction
The Atlantic Cable laid	1866	Atlantic—a clock ticks 8 6 6	o'er the Atlantic
Second Reform Bill passed	1867	Sceond—attractive 8 6 7	Second Reform Bill more attractive
Suez Canal opened	1869	Canal—attracting 8 6 9	all ships is attracting
Irish Church disestablished... ...	1869	Church—attacking 8 6 9	Church attacking
Ashantee War and king Coffee killed	1873	a king named Coffee 8 7 3	
Fire of Chicago and fall of Paris ...	1871	Paris—a lesson 8 7 1	on fire learns a lesson
Zulu War and Prince Imperial killed	1879	a Prince, yet missing 8 7 9	
Tay Bridge disaster	1879	bridge over—Tay missing 8 7 9	
Czar of Russia, Lord Beaconsfield, and General Garfield die ...	1881	Each—great nation 8 8 1	each mourned by a
Lord Cavendish and Mr. Burke murdered	1882	Fenians, way-lay two 8 8 2	
General Gordon killed at Khartoum	1885	Gordon—great fame dies 8 8 5	Gordon of great fame dies

For Dates of Accession of Sovereigns see "Kings and Queens of England."

Should further Dates be required, the reader is referred to Supplementary Paper No. 1.

ENGLISH SOVEREIGNS. *(See next page.)*

NORMAN.	PLANTAGENET.	LANC. & YORK.
William I.	Henry II.	Henry IV.
William II.	Richard I.	Henry V.
Henry I.	John.	Henry VI.
Stephen	Henry III.	—
	Edward I.	Edward IV.
	Edward II.	Edward V.
	Edward III.	Richard III.
	Richard II.	

TUDOR.	STUART.	GUELPH OR HANOVERIAN.
Henry VII.	James I.	George I.
Henry VIII.	Charles I.	George II.
Edward VI.	Commonwealth.	George III.
Mary.	Charles II.	George IV.
Elizabeth.	James II.	William IV.
	William III. & Mary.	Victoria.
	Anne.	Edward VII.

The "Kings and Queens" should be learned as arranged above. Let one dynasty only be learned at a time, and if the teacher will carefully point out the peculiar affinities in the names and order of each line, some of which we have indicated by the connecting lines, the children will have little difficulty in learning them.

The Dates of Accession of each sovereign for elder children are given on the following pages, arranged in short, easily-remembered presentations. These associations are perfectly natural; they do not lead the mind astray from the real facts of history, but each one is based upon some point or historical fact connected with the character of the sovereign, or with his or her reign.

This does away with the necessity for the use of homophonic analogies or similar sounds to prevent the associations and names being mixed. No confusion can take place if any knowledge of the history or characters is possessed, and they are only intended to be learned by children having some elementary knowledge of the subject.

The underlined syllables following the names give the order and number of the sovereign from William the Conqueror ; the remaining syllables give the date.

Most of the associations are to be read as being in the possessive case, as :—

Henry the Third's age, few can fix
2 1 6

Dates of Accession.

(One thousand must always be added to these numbers.)

Presentation. Name and Number Word.	Connecting Idea or Circumstance upon which the Association is based.
NORMAN.	
1 William I., strong pickaxe the conqueror's 6 6	sometimes called a battleaxe, a common weapon at this period
2 William II., rude mattress Rufus' 8 7	laid on a rude mattress, his body being carried into a peasant's hut
3 Henry I. seized an old throne 1 0 0	the throne belonged to his brother Robert
4 Stephen stirs anti-Christ 1 3 5	Stephen's action stirred up a war
PLANTAGENET.	
5 Henry II. cried lamplighter 1 5 4	cried for a lamplighter. The darkness and gloom in which his life ended is thus indicated
6 Richard I. begs complaining 1 8 9	Richard, long a prisoner, probably often begged for release
7 John left contentment 1 9 9	John forsook upright conduct and its consequent satisfaction
8 Henry III's age few can fix 2 1 6	one of our longest lived sovereigns
9 Edward I. finds Jews eschewed 2 7 2	Jews were expelled during this reign
10 Edward II. gone so ferocious 3 0 7	

Dates of Accession (*continued*).

Presentation Name and Number Words.	Connecting Idea or Circumstance upon which the Presentation is based.
11 Edward III. strong France reduces 3 2 7	
12 Richard II's land grew seditious 3 7 7	
LANCASTER.	
13 Henry IV. wrongly pretending 3 9 9	wrongly pretending to have rights to the throne of Richard II.
14 Henry V. conquers Burgundy 4 1 3	
15 Henry VI's young life marred too soon 4 2 2	began an unfortunate reign when only nine months old
YORK.	
16 Edward IV's complex correction 4 6 1	Edward caused Henry's son to be murdered in his own tent, and his own son was afterwards murdered by the same person
17 Edward V. languished for pity 4 8 3	
18 Richard III. cannot bear pity 4 8 3	
TUDOR.	
19 Henry VII. coming for great fights 4 8 5	coming prepared for great battles
20 Henry VIII. grew so violent 5 0 9	
21 Edward VI. knew none boisterous 5 4 7	Edward's gentle character led him to avoid rough and boisterous companions
22 Mary too soon fires lighted 5 5 3	
23 Elizabeth choose three wise pilots 5 5 8	her choice of statesmen and servants are thus indicated

Dates of Accession (*continued*).

Presentation, Name and Number Words.	Connecting Idea or Circumstance upon which the Presentation is based.
STUART.	
24 James I. Stuart exploded 6 0 3	or his parliament nearly exploded. (This idea may refer to the Gunpowder Plot, or to the king's hasty and sometimes impolite way of expressing himself)
25 Charles I. rude strife occupies 6 2 5	
26 Commonwealth new acts exerting 6 4 9	new forces at work in the national life
27 Charles II's foolish picnic jokes 6 6 0	
28 James II's moonlit exit wise 6 8 5	
29 William III's prudent acquitment (and Mary) 6 8 9	William's policy was marked by great prudence
30 Anne, she so resolute 7 0 2	
HANOVER.	
31 George I. beyond dishonour 7 1 4	
32 George II. he looked disputive 7 2 7	this refers to his disputes with his son
33 George III's receives physic old 7 6 0	
34 George IV. regards not true woes 8 2 0	this refers to his harsh treatment of the queen
35 William IV's seaside petticoat 8 3 0	was an old sailor, and ever fond of the sea
36 Victoria selects prettiest 8 3 7	as fortunate as Elizabeth in her choice and selection of public servants
37 Edward VII. bereft, fine clothes shunned 9 0 1	refers to his mourning for Victoria

A supplementary paper gives the Sovereigns of England connected with the key words in consecutive order for those who prefer it.

SCRIPTURE TEXTS AND NARRATIVES.

Biblical students can easily use the principles of sound to locate any text or passage of scripture.

To memorize the name of the book with the chapter is not necessary, though this is done with Biblical narratives and incidents as they are for the use of general readers.

But Bible students are sufficiently familiar with the style of the principal inspired writers, or with the circumstances connected with many of their utterances as to recognize them at once.

That such and such a passage is from the Psalms or from the prophecy of Isaiah, or the epistles of St. Paul, we can generally tell; but to give the exact chapter where to find it is to most a great difficulty. To be able to do this is a great advantage. and it can be accomplished in two ways:—either by making an association as with the examples at the end of this chapter; or, by finding number words from the passage to indicate the chapter where it occurs. Thus—

"All we like sheep have gone astray," etc.—ISAIAH, liii.
5 3

The third and fourth word give the number of chapter.

"Like as a father pitieth his children, so the Lord pitieth them that fear him."—PSALM ciii. 0 3

The 0 before the 3 would indicate that it was not Psalm 3 but 103. Thus it will be seen that it is not always necessary to give all the numerals; nor need they always be together. Thus—

"One generation shall praise thy works to another."—Ps. cxlv.
1 4 5

"Seek ye the Lord while he may be found, call ye upon
5
him while he is near."—ISAIAH lv.
5

In some cases, the number words may be taken from the context of an important passage, if the passage itself does not contain them. Thus it will be found that every chapter of interest throughout the Bible will furnish some verse giving the number words by which it may be remembered.

Narratives and Incidents.

These may be remembered in the same way, but if the reader's scriptural knowledge is not sufficient to give certainty, then the book as well as the chapter must be embodied in the association.

The method of doing this is to combine the subject with some word or words suggesting the book and chapter. Thus, take the following incidents from the Book of Jeremiah, given in the Old Testament narratives. The sounds or syllables suggesting the book are underlined.

Narrative	Book Chap.	Presentation	Notes or Associating Ideas
Proving of the Rechabites	Jer. 35	Jonadah's desire 3 5	Jonadah, son of Rechab
Jehoiakim burneth the Roll	,, 36	Jehoiakim's mean trick 3 6	read the circumstance
Jeremiah cast in the dungeon	,, 38	Jeremiah detained 3 8	
Destruction of Jerusalem	,, 39	Jerusalem sleeping 3 9	refers to the indifference complained of by the prophet

The above examples will be sufficient to guide the reader in associating any narrative, incident, or parable with the words suggesting the book and chapter where it may be found.

Should the reader desire to have all the narratives of the Old or New Testaments already associated and ready to hand, he can avail himself of the use of the Supplementary papers referred to on the last page, which also include the primary parables and discourses of our Lord.

GEOGRAPHY.

To remember any series of geographical names or facts, such as the succession of capes, bays, rivers, towns, provinces of any country, or their industries and exports. These should be learned by Analysis or Correlation, or by the Law of Presentation. The influence of Presentation in such tasks anyone can test for himself. If, for instance, a long list of words or names be divided into groups of three, and each group be assimilated in gradual succession, they will be easily learned and as easily remembered.

In some cases, four words may be included in a group if any of them naturally suggest each other; but in all other cases, three only should be included in each presentation. (See "rule," p. 24.)

Drawing Maps from Memory.

The most striking assistance which the system gives is the power to draw maps from memory with the greatest accuracy.

The "Rules of Sound" enable the student to fix and carry in his mind with scarcely an effort the Latitude and Longitude of the prominent points round a coast indicating the shape and configuration of any country or continent.

At one of our School Lectures (see Press reports) a boy drew from memory an outline map of England, in four minutes, covering a blackboard four feet square. This was accomplished by the pupil knowing the exact position of the prominent points in the coast line, and filling up the short intervening spaces from memory.

In this way may a student remember exactly, the position of any cape, bay, or river, or headland round a coast, the locality of great cities, the principal bends of rivers, and the termination and trend of mountain ranges, and these also give additional aid and support to the memory of adjacent areas and localities.

The Supplementary Papers in Geography give the important and essential points in England, Ireland, and Scotland; also in Europe, and the other continents.

The following are the first four from the map of Europe:

Position	Locality	Lat.	W. Lon.	Presentation, Assimilative Words	Number Words. Latitude	Longitude	Notes
Cape de la Hague ...	English Channel	50	2	a de la Hague	life-boat	flew	flew to the rescue
Cape Ushant ...	English Channel	48	5	you shan't	forget	twice	
Bayonne	Bay of Biscay	44	1	beyond	border	land	
Cape Finisterre ...	Spain	43	9	finished her	dirty	wine	

EXTENT AND POPULATION OF EUROPEAN STATES.

(FROM JOHNSTON'S GEOGRAPHY.)

The underlined words give the area in thousands and the population in millions. The words after the comma give the population.

COUNTRY	SQUARE MILES	POPULATION	PRESENTATION
British Isles ...	122,000 ...	38,000,000 ...	Britons some blue books, bewail
France	203,000 ...	38,000,000 ...	France new glory, creates
Spain	182,000 ...	17,000,000 ...	Spaniards cannot use, handcuffs
Portugal	36,000 ...	5,000,000 ...	Portugal peacocks, cry
Italy	112,000 ...	31,000,000 ...	Italy's handsome views, beyond
Greece	19,000 ...	2,000,000 ...	Greece, rulers use
Turkey in Europe	66,000 ...	5,000,000 ...	Turkey expects, strife
Austria	261,000 ...	44,000,000 ...	Austrian music one, murmurs
Germany... ...	211,000 ...	52,000.000 ...	Germans glue common, toybooks
Belgium	11,000 ...	7,000,000 ...	a Belgium bantam's, crest
Holland	12,000 ...	5,000,000 ...	in Holland canoes, glide
Denmark... ...	14,000 ...	2,000,000 ...	a Den marked number, two
Norway & Sweden	299,000 ...	7,000,000 ...	Swedes few dining, miss
Switzerland ...	15,000 ...	3,000,000 ...	Switzerland's grand heights, please
Russia	2,043,000 ...	71,000,000 ...	Russia through those fir trees, distant

The density of population—the number of persons to each square mile—can be ascertained at any time by dividing one number by the other

DISTANCE FROM LONDON OF THE PRINCIPAL CITIES AND PLACES OF THE WORLD.

(FROM HUDDLESTON'S CHART.)

PLACE	COUNTRY	DISTANCE IN MILES	PRESENTATION NUMBER WORDS FOLLOW THE HYPHEN	NOTES OR ASSIMILATIVE IDEAS
Capetown	Africa	6,580	Cape Town—fixed by Cape Hope	
Constantinople	Turkey	3,100	to Constantinople—we con no road	
Canton	China	15,650	Canton a—canny pigsty holds	
Quebec	Canada	3,020	to Quebec—queer folks do go	
Sydney	Australia	13,040	Sydney—money, folks borrow	
Dublin	Ireland	293	Dublin—dues many	
Paris	France	225	Paris pairs—soon unite	
Edinburgh	Scotland	391	Edinboro—repentance	Edin, Eden, fall, repentance
Jerusalem	Palestine	3,433	Jerusalem—deformity	contains much deformity
Suez	Egypt	3,437	Suez—delirious	Suez shares made some delirious
Khartoum	Soudan	4,633	Khartoum—perplexity	where Gordon was in [perplexity
New York	United States	3,375	New York, a—serious ride	to viands are attentive
Vienna	Austria	897	Viennese viands—attentive	
Malta	Mediterranean	2,427	Malta malt—superfluous	
Madrid	Spain	707	Mad and—frivolous	[complications
St. Petersburg	Russia	1,381	Petersburg—complications	where Peter made
Calcutta	India	12,160	Calcutta cuts—untrue anecdotes	
St. Michael's	Atlantic	1,520	St. Michael's—unripe do grow	oranges unripe do grow
Moscow	Russia	1,800	Moscow—bonnets hold snow	
Gibraltar	Spain	1,381	Altar, church and—congregation	Gibraltar contains altar, etc.
Cape Horn	South America	7,843	Cape Horn—prefatory	to storms is prefatory

MATHEMATICS AND PHYSICAL SCIENCE.

Mathematical and scientific formulæ generally consist of figures and signs. The Rules of Sound provide a means by which numbers may be easily transformed into rememberable words.

We give below an example how to remember some of the primary Logarithms of certain numbers, taking those of 2, 3, and 7. These may be connected or correlated to their corresponding key words to any extent. (See "Key," Chap. XIV.)

KEY WORD	CONNECTIVE WORD	INDICATIVE WORDS	NO. LOG.
Cook	—cook —	three soles from old negro's boat 3 0 1 0 3 0 0	2—3010300
Key	—a key—	heiresses want loose money 4 7 7 1 2 1 3	3—4771213
Cuff	—cuffs —	fit Carlyle's coat when made so 8 4 5 0 9 8 0	7—8450980

If preferred, any other word may be taken to indicate the number of the Logarithm, as follows :—

use—three soles from old negro's boat

In all cases the sentence should be so framed that the key word or number word of the Logarithm will suggest it.

Take next the ratios of certain angles from the table in Todhunter's Trigonometry" :—

	0°	30°	45°	60°	90°	
Sin	0	$\frac{1}{2}$	$\sqrt{\frac{1}{2}}$	$\sqrt{\frac{3}{2}}$	1	Sow—bamboos, and rue, renewed, once
Cos	1	$\sqrt{\frac{3}{2}}$	$\sqrt{\frac{1}{2}}$	$\frac{1}{2}$	0	Come—reduce, and rule, canoes, home
Tan	0	$\sqrt{\frac{1}{3}}$	1	$\sqrt{3}$	∞	Toads—unreared, none, read, verse

It will be noticed that the syllables indicating root 2, root 3, etc., all begin with "r." Thus it will be seen that though the system deals more especially with the sounds or names of numerals, yet we utilize in a similar

manner the names of signs, and it will be found that the name by its initial letter only will often afford the memory a suggestive clue which the sign never can. Take the signs of the Trigonometrical Ratios in the quadrants as an example :—

	1st	2nd	3rd	4th
Sine	+	+	—	—
Cosine	+	—	—	+
Tangent	+	—	+	—

In the first case the signs in the quadrant are :

Plus plus minus minus

Words arranged having the same initial letters will suggest them.

	Assimilating Words.	Quadrants.
Sine	signs	pull poor muddled men
Cosine	cousins	please many maiden poets
Tangent	tan	pits make parchments many

Of course, such a plan as just illustrated must only be resorted to in cases when the memory utterly fails to retain such a formulæ. Generally, the memory itself will grasp and retain them without artificial assistance, if rightly directed as shewn in Chap. VIII. on "Presentation." Not only must the rule given there be followed in regard to all formulæ, but the student should also write them clearly and legibly, closely observing their form and remembering their significance. Never write or copy a formula without thinking of its import, and those who have difficulty in remembering them should write them repeatedly.

These remarks apply only to signs, but in regard to formulæ or scientific facts expressed in numbers, the Rules of Sound are of incalculable service. These place the whole language at the service of the student, by which he may manipulate numbers in nearly every possible form by the aid of the Glossary of Words at the end of the book.

A person studying Acoustics recently brought us the following table that we might assist him in learning

it. As such tables are a common difficulty to science students, we insert it as an example and as a guide in reference to such tables generally.

ACOUSTICS.

Table shewing the Velocity of Sound

at how many feet per second it travels through the following substances:—

Oxygen	1,040 ...	Ox	shuns old harrows 1 0 4 0
Air	1,093 ...	Air	gone cold and wintry 1 0 9 3
Carbon Dioxide	1,100 ...	Carbon	common oh, no 1 1 0 0
Hydrogen ...	4.163 ...	Hides	are connected 4 1 6 3
Water	4,714 ...	Wat	er asunder 4 7 1 4
Alcohol	3,854 ...	Alcohol	creates cider 3 8 5 4
Lead	4,010 ...	Lead	barrows unload 4 0 1 0
Copper	11,666 ...	Cop	onions, quick, quick, quick 1 1 6 6 6
Oak	12,122 ...	Oak	on view, bamboos too 1 2 1 2 2
Ash	15,314 ...	Ashes	on Mike's Decanter 1 5 3 1 4
Iron	16,822 ...	Iron	contracts made too soon 1 6 8 2 2

When numerical facts contain decimals, they must be expressed as in the table of Chemical Elements on a following page.

CHEMISTRY.

To remember chemical formulæ where many figures are employed, the example of the Chemical Elements given on the following page must be followed, using one word to express the whole number and another to express the decimal. But if the formulæ have few numbers, and consist mostly of signs, the chapter on Mathematics must be well read and its directions carefully followed in regard to the Rule of Presentation.

Students who can generally remember them, will sometimes come across a formula which they cannot retain by any ordinary application. In such a case, the following process of dealing with signs, touched upon in Mathematics, must be resorted to. Words or syllables must be substituted whose initial letters are the letters of the formula, with another syllable added to express the number where a number follows the letter. Thus the following gives the formula to prepare Carbonic Acid :—

Hebrews out+crib old shoes=Hencoops cacle only

$$H_2O + CO = H_2CO_3$$

$$HO + CO = HCO$$

This plan must only be resorted to in the special circumstances mentioned, and it refers to formulæ only, but the memory of specific gravities, names, etc., is illustrated on next page. The special Supplementary Paper prepared for chemical students contains all the Elements from Newth's text book, arranged as indicated, by which they may be learned in a few minutes.

CHEMISTRY.—TABLE OF NON-METALLIC ELEMENTS, WITH THEIR ATOMIC WEIGHTS AND SPECIFIC GRAVITIES.

Non-metallic Elements.	Atomic Weights.	Specific Gravities.	Assimilative Words.	Number Words. Atomic Weight.	Specific Gravities.
Hydrogen	1	1	Hide her	John	John
Oxygen	16	16	An ox is	humpbacked	humpbacked
Nitrogen	14	14	At night we	slumber	slumber
Chlorine	35·5	35·5	Cloe	decides, right	decides, right
Bromine	80	3·18	Brown	Cato	sees, Hamlet
Iodine	127	4·95	I dine means	conclusive	work, inside
Fluorine	19		Flower time	coming	
Carbon	12	3·5	Cars and	canoes	we, ride
Boron	11	2·68	Bore on	handsome	blue, jacket
Silicon	28·5	2·49	Silly	curate, hides	two, virgins
Phosphorous	31	1·83	Foster	begun	some, ditty
Sulphur	32	2·07	Sulky	recruits	few, notice
Selenium	79	4·3	Selling	coffins	for, three

Where a decimal occurs, a comma is used, the whole number preceding the comma, the decimal coming after it,—thus : decides, right, 35·5.

The number words in the above examples are not underlined, as the whole of the words in the two last columns indicate figures.

DIETARY VALUE OF VARIOUS FOODS,

SHEWING THE PERCENTAGE OF NUTRIMENT CONTAINED IN EACH.

THERE IS CONTAINED IN 100 POUNDS OF			PRESENTATION	ASSOCIATIVE IDEA.
Bread ...	63 of nutriment	...	bread sticky 6 3	when unbaked
Butcher's Meat	38 ,,	...	meat creates 3 8	creates muscle
Potatoes ...	25 ,,	...	potatoes and rook pie 2 5	
Turnips ...	9 ,,	...	turnips not wine 9	not wine but water
Carrots ...	17 ,,	...	carrots famish 1 7	lowest except turnips
Peas ...	84 ,,	...	peas better 8 4	better than the former
Beans ...	82 ,,	...	beans, take few 8 2	
Barley ...	84 ,,	...	barley bitters 8 4	barley makes bitters
Lentils ...	85 ,,	...	Lentils and	the two are combined
Wheat ...	85 ,,	...	wheat make life 8 5	
Sago ...	82 ,,	...	sago, say you 8 2	a supposed interrogation
Rice ...	92 ,,	...	rice include 9 2	include in our diet
Oatmeal ...	91 ,,	...	oats in Lincoln 9 1	used or grown in Lincoln

HOW WORDS MAY EXPRESS BOTH FACTS AND NUMBERS.

As already indicated in Chap. XV., a word may express a fact as well as a number by its initial letter. Thus, a chemist memorizing a recipe, the quantity being two grains. He would select a word beginning with "g" to express the number. Thus

Quinine two grains—Queen's groom
2

would suggest both the drug and the exact quantity indicated by the number word.

Suppose it is desirable to recollect the library number of any volume in a public library without consulting the catalogue. The number word selected and associated with the title of the book should begin with a certain letter to indicate the department in which it is to be found, whether of Science, Art, Fiction, or Travels, thus :

Fiction 325—Free school boys

Travels 184—Translator

So in commercial matters, words will often serve the double purpose of suggesting not only a fact, but the rate or value connected with it.

Suppose a clerk wishes to remember the rate for the carriage of goods, say, from Lincoln, his place of employment, to any other town in England or abroad. Thus suppose the staple product of the firm is machinery, carriage per ton to Liverpool, 35/-. The word "Levite" would give 35, and its initial letter would suggest the place ; or a word may be added thus—a living seaside. So, for many other purposes, as shewn in the chapter on "Clairvoyance" may words be used to indicate both kind and value, place and distance, article and price, at the same time.

ARITHMETIC AND ACCOUNTS.

Railway Time-Tables and Commercial Correspondence.

Though the Rules of Sound make the whole of our language express numbers in endless variety of form, yet their greatest aid to Arithmetic is not in working out rules, but in remembering totals or results.

When it is desirable to remember the correct answer in numbers of any sum or calculation of any kind, the answer should be translated into number words by the aid of the Glossary of Words provided for the purpose at the end of the book, and then associated in the mind with the fact or question connected with it.

Should it be in pounds, shillings, and pence, each denomination should be expressed in a separate word, yet all united by one idea, thus—

	£	s.	d.
Desolate, dandy, flies—	708	13	5

In Bookkeeping also and the recollection of accounts the principles are of unlimited service. To remember the ledger page of any person's account, some word expressing the number should be associated with his person or name. Very often, the name itself will be found to express some part of the number.

The amount of customers' balances may also be associated in the same manner. Take the following examples of Application :—

	£	s.	d.
Tatton—to be paid	2	3	8
Cooper—carries unwise news	43	15	2
Moseley—might have none	5	7	1
Walker—some yet owes	1	8	0

Lists of prices, Railway Rates, and a host of other commercial facts essential for business men to have at

ready command may be remembered in this manner with scarcely an effort when once associated.

When any numerical or commercial fact has two separate numbers connected with it, the association must be so formed as to express one of the numbers in a separate word, or be otherwise distinguished by the phraseology of the sentence. Suppose an accountant wishes to remember the assets and liabilities of W. Brown: liabilities, £3,707 ; assets, £840. The distinction of the two amounts would be indicated by the form of the association thus :—

Brown, he discloses, great sorrows
3 7 0 7, 8 4 0

So when it is required to remember the date of the birth and death of any person, the birth is put just after the name. Take that of Napoleon Buonaparte, born 769, died 821, the 1000 always being added—

Buonaparte distracting and petulant
7 6 9 3 2 1

In this way may numbers be combined in any form and with any fact.

Railway Time Tables.

To remember the departure of trains from any station during any period of the day, it is only needful to link together in one complete idea the separate numbers indicating the time of each train.

The whole of the trains need not be included, only those leaving during that portion of the day when the journey is made. To many, the trains running during a certain hour would suffice, say from 8 to 9 a.m., or 9 to 10. The time of each departure should be expressed by a word or words, and these linked together as stated. The morning expresses from King's Cross to Leeds and the North may be expressed as follows :—

Leave by sunrise, this annoys, wake surprised, and cold besides
Leeds—5, 1 5 — 7, 1 5 — 8, 4 5 — 1 0, 3 5

Commercial Correspondence.

A clerk may memorize his correspondence with any person by correlating together four words ; the first suggesting the date of the letter, the second the name of the correspondent, the third the subject, and the fourth the number of the letter. Thus, suppose a letter is received on May 29th, from Cartwright & Co., and is a complaint of some damage, defect, or shortness of weight, say the latter, it may be correlated or associated by the following words :—

May 29	Cartwright	shortweight	No. of letter, 93
musing	carter	short and	empty

The above four words would thus suggest the particulars connected with this letter.

To remember all the principal letters received on any given date, take a suggestive word for each letter and associate them together to a first word expressing the date as shewn above.

FINANCE.

Interest Tables and Life Assurance.

So widely do the principles of Interest and Insurance touch our industrial and commercial life that the power to give quickly various estimates and remember the exact amounts involved in certain investments and risks and be able to quote them readily without the tedious reference to tables, etc., is a great advantage, and not only saves time, but gives many opportunities and openings in business which would be otherwise lost.

The system enables anyone to easily fix such tables in mind so as to be unforgetable, and we have had in use some time for commercial men knowing the Rules of Sound, a Supplementary Paper devoted to these two subjects. This contains a very unique Interest Table,

which covers the whole ground of finance, being applicable to any rate of interest, to any amount, and for any length of time, from one day upwards. The table is remarkably simple and suggestive, using only 19 days as the basis of computation, which are arranged in the following order :—

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

The 19 numbers of days here given form a Suggestive Key (like the Calendar given on a later page) from which the interest for any number of days can be immediately known.

We give below three examples from this and also from the Life Table the whole of which can be learned by anyone with once or twice reading :—

No. of Keyword	Keyword giving number of days	Number words expressing amount of Interest on £100 at 5 per cent. Shillings	Pence	£	s.	d.
4	curs —	one	gone		1	1
20	Crusoe —	cried	nightly		1	$5\frac{3}{4}$
70	frescoe —	dancing	rooms		19	2

When the word standing for the pence contains more than one syllable, the last syllable gives the number of farthings.

Life Table.

No. of keyword	Keyword giving age	Number words expressing premium Pounds	Shillings	Pence	£	s.	d.
26	tunics	few	are	right	2	4	5
27	tourists	two	lie	out	2	5	8
28	toothache	through	draughts	cold	2	7	0

The table here used is that of a prominent office whose business is world-wide ; but should any other be required, the reader can easily make his own adaptations to it, for which the one given in the Supplementary Paper will serve as a guide, as it extends up to 70 years.

ADVANCED GRAMMAR.

The special help which the system gives in this subject is more especially shewn in its power to classify and arrange in retentive order the best laws governing correct composition. Forty-nine Rules of Syntax selected from the most eminent English grammarians, including Mason, Morrell, Micklejohn, Cornwall, Lennie, and others are classified and arranged in consecutive order so as to be easily recalled to mind whenever required.

As this arrangement of the Rules of Composition is too extensive to be printed in any book, it forms one of the Supplementary Papers specially prepared for the use of authors, writers, and others, referred to on the last page.

The rules are arranged in sections—nouns, pronouns, verbs, adverbs, adjectives, and articles being dealt with in due order. Laws governing nouns and pronouns extend to 20, verbs to 30, and adverbs and adjectives to 40, while the minor parts of speech take the remainder.

These rules form the clearest guide to correct composition ever compiled and are invaluable to all who are anxious to know how to write correctly. They will impart a clearer and more definite knowledge of the subject than many could gain from books in a lifetime.

We give below two examples from the section relating to adverbs Nos. 33 and 34, the syllables giving the number being underlined :—

No. 33.—"Only" should always follow the noun it qualifies, but precede the adjective, adverb, or verb.

No. 34.—Never, Sometimes, Always, Often, etc., are generally placed before the words they qualify, the exception being the verb "to be."

EUCLID.

The paper on Euclid, succeeding the Syntax paper on the appended list, deals with the problems of Euclid in a similar manner. The number and order of each problem are known from certain words or syllables in each definition, and directions are also given for connecting them with the key words if desirable.

MEMORY AIDS TO LITERATURE.

Some time since, we prepared a paper on Literature for the use of students, and as the reader may desire to know how aid may be afforded to the memory on this subject, we here give the necessary guidance to enable him to arrange such a paper for himself, or if unable to do this, he can have recourse to the supplementary paper referred to.

The literary history may be divided either into periods or centuries, and a list of the principal characters who lived in each period is selected. These are so arranged that their position in the list of names instantly tells in what particular sphere or work they were distinguished. The effect of contrast is utilized, artists being placed first as follows :—

ARTISTS	COMMANDERS	DIVINES		POLITICIANS	WRITERS
including	Naval or	Religious	...	Statesmen,	upon all
Sculptors	Military	Reformers,	...	Political	subjects
and		Bishops,	...	Reformers,	
Painters		etc.		etc.	

The alphabetical order is the suggestive principle adopted, and the position of the name in the list, its distance from the beginning or end, indicates at once (when the list has

been learned) the particular sphere in which each was famous. Confusion is prevented by the striking contrasts of the classes following each other. Thus statesmen come between poets and writers, and those famous in war separate those famous in art or religion.

MEMORY OF LAWS AND ENACTMENTS.

Students preparing for law examinations, and those already engaged in the legal profession are often greatly inconvenienced by their inability to remember the particulars connected with various enactments, such as the number, place, period, &c., when any Act of Parliament was recorded.

Three things are absolutely essential to every law student or solicitor respecting any enactment likely to be required or questioned upon :

1. The Sovereign under which the Act became law.
2. The number of the Act upon the Statutes.
3. The chapter where the clause in question may be found.

The following, taken from Stephen's Commentaries will be sufficient to shew the student how to apply the principles of sound to their recollection.

ENACTMENT	WORD SUGGESTING IT	NUMBER	SOVEREIGN	CHAP.
Enrolment of Sales Act	enrolled	Jewess 2 7	hates Henry VIII	antics 1 6
Old Wills Act	old wills	Hebrew 3 2	hailed Henry VIII	one 1
Habeas Corpus	Corpus	becomes 3 1	cooped Charles II	soon 2
Fines Abolition Act	Fines	he and her 3 and 4	warn William IV	never 7 4

When successive enactments occur under different sovereigns the association must be extended. Take for instance the "New Wills Act."—

New	Wills	have	worn	Lunn's	tunic
		7	William IV	Vic. I	2 6

As V for Victoria is a very uncommon initial, words beginning with L to indicate the Late Queen or Late Reign may be used instead, thus—Life, for (5) Late reign.

When it is desirable to remember important decisions in connection with them, the association must be extended by using a word to suggest each important case.

HOW TO LEARN A NEW LANGUAGE.

The primary principles to be brought into operation are those of Analysis, Presentation, and Correlation, the first being especially needful in studying the Grammar, the mastery of which depends upon that close observation and comparison of affinities dealt with in Chap. VI.

The methods of minimising its difficulties will be found clearly indicated in our remarks upon Latin, and we shall therefere confine our remarks here to French only.

With regard to French Grammar, so many efforts have been recently made to simplify it that having briefly pointed out the more valuable of these, we shall pass on to consider the vocabularies or the language as a whole.

The similarities of terminations in many of the tenses are now pointed out in many grammars—Chardenal's especially gives a table shewing at a glance the distinguishing terminations of all the regular conjugations in every tense.

All these arrangements are of great value in remembering the grammar, but in learning the vocabularies

and language generally the student is left more to his own resources.

In learning foreign words, the comparison of every word with its English equivalent is necessary. This should be done as directed in Chap. VI., and, if possible, all other words should be excluded from sight while the first impression is being secured. The chapter on Presentation will shew that "Contiguity" alone will often secure recollection when all other elements influencing memory are absent. But in addition to this, a careful comparison will seldom fail to reveal some points of affinity or contrast either in form, sound, or idea, which will aid their subsequent recollection one with another.

When both Comparison and Analysis fail to recall a word, then the principle of Correlation may be used with advantage. (See illustrations of this process in Chap. VII.)

All the principal nouns, verbs, etc., of a language may be easily learned in this manner, and if afterwards combined into short sentences with other parts of speech, the law of verbal cohesion will secure their subsequent recollection.

Each sentence should, if possible, be legibly written and repeated aloud; first slowly, then more quickly, for a few times each day, until it can be as readily articulated as any sentence in the student's own language,

In correlating foreign words we may generally fail to obtain sounds exactly like them, but sounds or words sufficiently alike as to suggest them will answer the end quite as well. We give the following examples from the first page of the French Correlations forming one of the Supplementary Papers :—

acheter	ash, dirt, deprecate, to bargain	to buy
agacer	aggrieve, aggravate	to annoy
aiguille	aguish, ague, anguish, sharp pains	a needle
aller	alley, passage, way, going away	to go
apparat	apparel, parade, to shew off	show
aperçut	apparent, obvious	perceived
appartent	appertain, pertain to	belong

apprends	I apprehend	I learn
arrêté	arrest, arrested	stopped
assiette	set, service, dinner plate	plate
autel	hotel, dining, table, communion table	altar
avare	avarice, avaricious	miser

GERMAN.

In studying German, the same process must be employed, but the different genders and the various exceptions of the declensions must be correlated together in groups, after the examples of personal names given in Chap. VII.

A Supplementary Paper containing a Correlation of the principal German words arranged in alphabetical order, as in the Latin and French, is prepared for students, the following examples being taken from the first page :—

abend	bend, break, day-break. sunset	evening
aber	arbour, garden, water-butt	but
abreisen	rise, rising-up, leaving, departing	to depart
abschreiben	scribe, writer, copyist	to copy
achten	ask, petition, favour, esteem	to esteem
alt	halt, lame, old-age	old
andere	the hand, the other hand	the other
angenehm	angry, cross, disagreeable	agreeable
angewendet	vendor, salesman, employ	employed
ankleiden	Clyde, Scotch river, Scotch Tweed, dress	to dress
arzt	arts, Master of Arts, M.A., M.D.,	physician
aufgabe	garb, dress, uniform, drill	exercise

LATIN.

In connection with this subject, we have already two Supplementary Papers prepared for students, and

which have been greatly appreciated by all who have used them.

The first is a Correlation of the whole 62 vocabularies of Dr. Smith's "Principia Latina," arranged in alphabetical order, so as to be used with all Latin grammars and text books. The paper contains nearly 800 of the most difficult Latin words, as all words having any similarity to their English equivalents like Rosa, Causa, etc., are omitted. The words can be learned by once or twice reading, and by studying them ten minutes and the grammatical forms twenty minutes each day for forty-eight days, these twenty-fours' study will be sufficient to acquire the rudiments of the Latin language as far as memory work is concerned.

The second paper on Latin grammar is purely elementary, and is more especially designed for those beginning the study of Latin at an adult age. The paper deals specially with the terminations of Declensions and Verbs, and also contains valuable notes for remembering the genders.

HOW TO REMEMBER A BOOK WITH ONCE READING.

To remember the contents of a book with "once reading," as students understand the term, necessitates very careful reading—more than can be given to every book we may read. But where the book is valuable and its subject matter important to us, then no amount of care and attention should be considered too much; and if the reader will do as directed below, he will possess a more complete knowledge of the book after once reading than by many times reading in the ordinary way.

First, then, follow particularly the instructions dealing with root-words and ideas in Chaps. XI. and XII.

When a chapter of the book has been carefully read, the root words of the principal ideas underlined in the margin, and the sequence of the intermediate ideas carefully noted, then he should arrange the root words into rememberable order, and by their suggestion the subject matter of the chapter.

This plan should be adopted with every succeeding chapter, and the abstract of each written upon a slip of paper to be examined and reflected upon in any spare moments before proceeding to study another chapter.

The student should frequently test the suggestive power of his abstract—whether the words will recall the primary ideas and whether these will recall the successive ideas logically connected with them. If there is any break in the chain or failing in the connection, the failure should be observed and guarded against in future.

When the book has been read, the abstracts of the different chapters should be still further condensed into one suggestive or representative word, or one taken from each which will suggest the whole of the abstract.

These representative words, one standing for each chapter, should be linked together to form a total abstract suggestive of the order and matter of the whole book. This abstract or mnemonical suggester may be attached to the book and reserved for future reference, as the abstracts of the separate chapters may be also.

HOW TO SPEAK WITHOUT NOTES.

For those who write their discourses or in other respects make elaborate preparation, they should learn the contents of their manuscript by employing the principle of root words and analysis, as fully explained in Chaps. X., XI., and XII.

By following those directions, the thoughts and language of each portion or division of the discourse may

be easily acquired, but the remaining difficulty will be to remember the first thought in the following division when the speaker has reached the end of the first. To effect this object, a correlation may be formed between some word in the last idea and some word which would suggest the first idea of the following series, as is shewn in the rule for remembering verses.

Some of our most famous orators have cultivated the practice of concluding or finishing the points or arguments of their orations by a quotation of poetry or passage from some authority bearing upon and supporting what has been said. When this is done, the use of the method just referred to is easily applicable to such a style.

EXTEMPORANEOUS SPEAKING.

As a help to the rapid arrangement of thoughts, the "Alliterative Key" in Chap. XIV. will be found invaluable if it is well known and can be easily manipulated, especially when placed in circumstances where writing or other preparation is impossible.

The topics or points upon which you desire to speak should be instantly secured by associating each one with a key word in the order in which you intend them to come to mind when addressing your audience. Rapid association of words should be practised, and only one word used to suggest each point or idea. The first idea to be recalled should be associated with the first key word, the second likewise connected with the second key word, and so on with the remainder. If the process is properly done and the key well known, the various ideas, opinions arguments, anecdotes, etc., will be readily and easily brought to mind by simply recalling and reflecting upon the key words to which you have connected them.

MENTAL REPORTING.

In like manner may the separate ideas of a discourse be fixed in the mind even while the speaker is delivering it, when the student is sufficiently practised in rapid association and in the ability to instantly select the best and most suggestive words connected with each idea. These suggestive or root words may be afterwards correlated to the key words if it is desired to permanently remember them. (See Chap. XIII.)

DEBATING.

In using the key for debating purposes, it is best to reserve one column of the key to each speaker to whom it is necessary to reply, even if the points of criticism be only two or three in each case. This will enable a person to remember their several objections in their proper order and to answer them all together with little difficulty.

PREACHING WITHOUT THE KEY.

A preacher may apply the same principles in a different way. Instead of connecting his leading ideas with the key words, he may use a chapter in the Bible for the same purpose and connect his ideas with the first picture-word which occurs in each verse of the chapter. The chapter from which his text is selected should be preferred, if in other ways suitable. Then, by having

the chapter open before him, and casting his eye upon each verse in succession, the ideas connected with them will be instantly brought to mind as they are required.

TEACHING.

In the manner before described may Sunday school teachers easily remember their illustrations or any fact or incident bearing upon the verse in question. The word suggesting the illustration or anecdote should be associated with the most suitable word in the verse upon which it bears, and in connection with which the teacher desires to remember it. If this is done, it will be next to impossible to read the verse, or to hear it read, without the illustration coming to mind. By this method of application to preaching or teaching the key is not required, and the objections of those who think it unsuitable to sacred associations are thereby removed.

In like manner may teachers, in any kind of schools, or of any science or subject, use the prominent words in their text books or lesson books as Suggesters by which they may remember the various illustrations, proofs, etc., bearing upon their lessons. The principle of root words is of illimitable application and adaptation, and it would be difficult to name a sphere of usefulness where it is not of service if rightly applied.

MEDICAL STUDIES.

All anatomical and medical terms should be learned by Correlation, as exemplified in the Latin Vocabularies.

Where numbers are connected with the terms or facts to be learned, such as the number or character of certain joints, nerves, veins, or arteries ; the pulsations

of the heart under certain conditions, or the number of pulse beats distinguishing different ages; the time required for the complete circulation of the blood through the human body; the character or duration of symptoms connected with various diseases or poisons. In all such cases the number words expressing the fact must be correlated to the fact or thing in question.

In like manner, "recipes," or quantities of drugs, as expressed on page 75, can also be connected with the name of the complaint for which they should be administered in the same way. For summarizing and remembering the contents of Medical Text Books, the directions on page 87 should be followed.

HOW TO REMEMBER VERSES.

The brief remarks here made do not refer to the learning of poetry in general, which is fully explained in Chaps. X., XI., and XII.), but only to the recollection of the order and sequence of verses.

Rule of Application.

Connect the last noun or picture word of one verse with the first word or noun in the verse following by correlation or otherwise. The connection may, in some cases, be artificial, or a simple comparison of the two words will often suffice.

Take as an illustration Cowper's hymn on "Providence," commencing "God moves in a mysterious way." The last word in the first verse is "storm." The first suitable word in the next verse is "deep." Compare, very carefully, these two words, "storm—deep." Reflect upon them and let the mind assimilate and associate them one with the other. When a connection is formed between them, reflect upon it every time the verses are repeated. Never allow yourself to repeat the

verses at any time without thinking of the two words binding the verses together. In this way may verses be connected to any extent without the use of a key or any other artificial assistance but what is abundantly found in the poetry itself.

HOW TO REMEMBER NAMES.

For illustrations of how to remember personal names, see examples in "Methods of Application," Chap. XV. In these cases the names are correlated, but for present and immediate use a simple spontaneous association will often be sufficient. Suppose, for instance, that we are introduced to a Mr. Northcote, a little reflection upon the name and the person will often suffice to link the two together. Thus—"Does he live in the North?" "Has he come from South or North?" "Is he sunburnt or ruddy?" These reflections and comparisons should bear directly upon the dress and appearance, manner and aspect of the person. Thus, to a person whose manner was cold and reserved, the name North would immediately assimilate itself; while if his manner was genial and mild, the contrast would equally impress memory. These spontaneous associations will generally suffice; but when time will allow, correlations are to be preferred. (See Chap. XV.)

NAMES AND ADDRESSES.

To remember instantly a person's address, think of the key word or other words which it may suggest from the Glossary, which will express the number of the house and instantly associate it with the name of the street in

question. To do this requires a knowledge of the key by which you always have at command a certain number of words expressing numbers up to 100, and beyond that by using combinations.

NAMES IN CONNECTION WITH EVENTS.

To remember the particulars of any occurrence, three things only should have our attention:—(1) The name of the person or thing primarily concerned; (2) The locality or place of occurrence; (3) Select some word which will remind you of the primary particulars or agency by which it was brought about. Round these three essentials will the various particulars centre, and these three factors of recollection will always recall the minutest details of every event. So with Historical Events. In these, the primary difficulty with many is to remember the name of the principal actor owing to the unfamiliar character of the names. Thus, most persons know how the specific gravity of gold was discovered by a certain philosopher experimenting with Hiero's crown, but they fail to recollect his name. This difficulty can only be met by correlating or verbally associating the name or something to suggest it with the event. Thus, "Hark" would suggest Archimedes, and this might be associated with the event, thus—Hark, Archimedes cries "Eureka."

So we may likewise remember that the name of the Greek athlete who carried the ox was Milo by bringing the word "mile" in association with the event.

HOW TO REMEMBER FACES.

Persons who fail to remember faces should cultivate more the memory of form. Fix your mind each day upon some common object which you have to pass.

Notice it particularly in all its parts. Take into your memory as much of it as possible, whether it be a monument, a house, a boat, a mill, a picture ; and then try each evening to draw an outline of it. Above all, be ever trying how much of the form of anything you can take in at a single glance. Do this with faces, letting no peculiarity escape you. Do not attempt to remember every person and thus overtax your powers, but try single tests first. If expecting to be introduced to a person whose name and face you wish to remember—first, secure the name as directed in last chapter for the name is upon your ear but a moment. Then observe the person thoroughly. Let the ear notice the voice, the eye notice the face in every particular. Let the feelings bear the full impression of the person's aspect or bearing, whether harsh or gentle, austere or kind. We may thus get a threefold impression of each person we have to deal with, and each of these impressions will support and strengthen the others. In our recollections of this person afterwards, let each memory sense speak. Let the ear recall the tone of voice ; the eye recall the form and features ; the feelings (pleasant or otherwise) recall the peculiarity of manner which produced them. When this has been done, link these several impressions with his name, and his name with the primary feature of his character. This will ensure the recollection of either—whichever is presented to the mind first.

PLACES AND ROADS.

To find your way about a strange town, notice well the point from which you start—whether it be a railway station or hotel. Be sure of your direction, either by the position of the sun or by carrying a pocket compass. By this you will know what streets run parallel with each other, and whether you are going nearer to or further from your starting point. Care must also be taken to

notice the names of the streets at each turn as well as their appearance or any details which will aid in their recognition if returning the same way.

Persons who fail to remember their own immediate neighbourhood should make a rough sketch map of the localities which perplex them, shewing how the main streets intersect each other. This may be done by themselves or by a friend, and it should be frequently consulted until the whole outline is imprinted upon the memory and the main and intersecting streets thoroughly known.

The increase of cycling is tending to make more necessary an intimate knowledge of roads and topographical areas. The cyclist who can easily remember his map, the road, and the intersecting roads which determine his route, is saved much time and trouble ; otherwise he is constantly delayed by frequent consultations of his map or making enquiries by the way. Even in this matter, the Rules of Sound, if well known, will render him great help.

Suppose the cyclist has to leave the main road (which is generally easy to remember) and take a cross-country journey to some place. He must first examine the section of road before starting, as shewn on his map, noting all the particulars ; how far the main road has to be travelled before a turn is made from it ; how many roads lead out of the main road before the proper turning is reached. The number of these turnings should be fixed in mind by a word expressing the number before the map is folded away. The more striking the word the better, and to indicate whether the turn is to the right or the left, a word must be selected whose initial letter is "r" or "l," or any other letter may be used to make the word indicate both number and direction, thus :—

The fifth turn to the left ...	Life
The fifth turn to the North ...	Night
The fifth turn to the West ...	White
The sixth turn to the right...	Rick
The sixth turn to the South	Stick
The sixth turn to the East ...	Eric

HOW TO REMEMBER DISCONNECTED NUMBERS.

To do this, it is necessary to know well the key, as the key words are all picture words giving concrete ideas or objects easily remembered. These should be associated with well-remembered localities in their proper order. Suppose the reader wishes to fix instantly in mind the four following groups of figures:—420, 234, 675, 316; he immediately thinks of a certain room in his own house and uses the first four places or articles of furniture in which to locate them. Suppose the fireplace is used first, then the mantelshelf, then the different localities or articles, going round the room from left to right. The key words for the first number are "Cur" and "Crusoe." These objects should be placed in the firegrate, forming an imaginary picture. The key words for the next group are "Cook" and "Tea-urn." Locate these on the mantelshelf. The key words for the third group are "Cock" and a "Fish-wife." Locate these with the first article of furniture to the left, which may probably be an arm-chair. The key words for the last group are "key" and a "convict." These may be associated with the next article. If it is a chiffonnier, the convict may be imagined seated upon it. Now, if the reader will allow his mind to go back to each locality, he will find that the objects placed there will be seen and remembered, and these will suggest the numbers. By using more articles or localities, he can remember more groups of figures, and when one room is filled, he can proceed to use the objects or positions of another in like manner.

HOW TO LEARN THE CALENDAR.

In the calendar given on the next page, the following particulars must be observed:—Each underlined syllable

suggests by its sound the date of the first Sunday in the month, while the first or primary sound suggests the month itself. Thus "Gentle" will suggest January, and "tile" will suggest 5 according to the Rules of the System. Therefore, knowing that the first Sunday in January is on the 5th, you can easily get the day upon which any other day falls. Suppose you wish to know upon what day of the week the 29th of January falls. Knowing that the first Sunday is on the 5th, you calculate by weeks until you reach the Sunday nearest the date you require, thus: 5, 12, 19, 26—the 26th being the nearest Sunday, the 29th must be on a Wednesday. Thus the last syllable of each association gives the first Sunday, any other date being obtained by calculating from the first Sunday. The reader will have little difficulty in forming for himself a calendar for each year, or it may be used as a perpetual calendar by calculating future dates from present year, as explained in most encyclopædias.

CALENDAR, 1902.

January	Gentile	...	5
February	Febrifuge	...	2
March	Maroon	...	2
April	Apex	...	6
May	May fair	...	4
June	Junction	...	1
July	Judex	...	6
August	Augury	...	3
September	Septimus	...	7
October	Oxide	...	5
November	Noon	...	2
December	Desist	...	7

CLAIRVOYANCE.

The principles of mental suggestion embodied in the Rules of Sound, by which articulated words can suggest numbers to another person, lend themselves to many forms of entertaining mystery, and if we indicate one or two it is in the hope and trust that such knowledge will never be used for any dishonourable purpose, but for unselfish and harmless amusement only.

Two persons knowing the system could easily astonish any company, and arouse their curiosity and interest. The power to suggest values and numbers by accenting certain syllables is capable of endless adaptation and utility even in business ; while the fact that a word may be used to convey to another both a fact and a number at the same time makes the principle doubly valuable in all card tricks and such like performances.

Thus supposing a gentleman is performing a few card tricks by the aid of a friend who forms one of the company. Such a person could suggest to the performer by one accented word only, though blindfolded, not only the nature of a card, but the number also.

Suppose the card be "Six of Diamonds." The word "duck," "Dick," or "deck" casually introduced in the conversation would not only suggest the number 6, but the initial letter would indicate its kind. In like manner would the "Six of Spades" be indicated by "speck," "sprig," etc. ; the "Six of Hearts," by "hack," "hock," etc. The word "dive," "die," etc., would give "Five of Diamonds," and "spy,', "spice," etc., would give "Five of Spades."

In many other feats of Clairvoyance are the Rules of Sound equally effective and useful. Suppose two students knowing them are in a company of friends. One may be blindfolded and placed anywhere in the room, and the other may hold up any current coin which any

of the company may produce, and then the blindfolded person is able to tell instantly what the coin is. To do this, the person putting the question simply emphasizes some word indicating its value. Thus, suppose it is a shilling, the words "Can you" accented in the question would reveal the number or value of it.

Following is a set of questions, one for each current coin ; the underlined words indicate, according to the Rules, the number of pence or shillings in each.

1d. What is this in my hand?
1

3d. What may this be?
3

6d. Be quick and say what this is.
6

1/- Can you tell what this is?
1 2

2/- Can you, Sir, tell what this is?
2 4

2/6 Please show what this is.
3 0

4/- Are you able to say what this is?
4

5/- Try to tell what this is.
5

10/- See if you can show what this is.
1 0

20/- Do you know what this is?
2 0

To indicate a half-penny, always bring in the word "laugh," or any word sounding like "half," as :—"Do not laugh, but tell me what this is ;" or—"Have the goodness to say what this is.

MUSIC.

Musical Terms.

These must be learned according to directions for remembering foreign words in Chap. VII., and in "How to learn a New Language."

How to remember the Piano Keys.

This is often a difficulty to beginners, and the following lines will assist them :—

All the G and A keys
Are between the black threes,
And 'tween the twos are all the D's,
Then on the right side of the threes
Will be found the B's and C's;
But on the left side of the threes
Are all the F's and all the E's.

So in remembering the notes on the stave, the treble notes may be remembered by F, A, C, E—face. Notes on the line by E, G, B, D, F, "Eggs bad of." The consonants of this phrase by omitting "s" and using "e" give their order.

How to remember the number of Flats or Sharps in each Key.

Before passing to the subject of Musical Examinations, we give a table on the following page to assist the student in remembering the number of flats or sharps in each key. Each association should be repeated along with the name of the key until the name of the key recalls the association. The last word indicates by its sound the number of flats or sharps in each, whilst its initial "s" or "f" tells whether flats or sharps are indicated. Associations connected with Minors contain both "m" and "n," but those suggesting Majors contain "m" only.

NAME OF KEY	NO. OF FLATS OR SHARPS	ASSOCIATION INDICATING THE NAME AND NUMBER
A major	3 sharps	A major see
A minor		
A flat major	4 flats	A flame flares
A sharp minor	7 sharps	A salmon sieve
A flat minor	7 flats	A flaming flash
B major	5 sharps	Bump sides
B minor	2 sharps	Barmen's shoe
B flat major	2 flats	Beef hams few
B flat minor	5 flats	Bluff men fly
C major		
C minor	3 flats	Coming feet
C sharp minor	4 sharps	Cash men share
C sharp major	7 sharps	Cashmere soft
C flat major	7 flats	Coughs lame fast
D major	2 sharps	Dumb shoes
D minor	1 flat	Demand from
D flat major	5 flats	Defame five
D sharp minor	6 sharps	Disseminate shocks
E major	4 sharps	Emma's snare
E minor	1 sharp	Emin shun
E flat major	3 flats	Effluvium freeze
E flat minor	6 flats	Effeminate flocks
F major	1 flat	Fame found
F minor	4 flats	Famine fare
F sharp major	6 sharps	For shame shock (ing)
F sharp minor	3 sharps	Fish men scheme
G major	1 sharp	Jim's song
G minor	2 flats	Gemini flew
G flat major	6 flats	Jeff's lamb flock
G sharp minor	5 sharps	Jasmines sigh

A minor and C major are naturals.

The proper order of the flat and sharp keys is easily suggested by the following phrase—GooD AlE and BeeF. The capitals give the sharps if read forward, and the flats if read backward.

Musical Examinations.

The primary subjects upon which students are questioned besides the matters already referred to are

the lives and works of the principal composers. These should be diligently studied, and the essential points, which should be thoroughly mastered, in connection with each may be stated as follows :

BIRTH	CAREER	WORKS	DEATHS
Place	Education	First work	Place
Time	Special difficulties or advantages	Greatest work	Time
Circumstances	Contemporaries	Style or characteristic	Circumstances

As it is essential to know well the period in which each character lived, the date of birth or death, or date of composition of his greatest work should always be known. In the following examples the date of death only is given, but they will serve to show the reader how to apply the principles of sound so as to remember those points connected with each subject, which are essential to the suggestion of other particulars.

WORD SUGGESTING NAME.	WORD SUGGESTING GREATEST WORK.	WORD SUGGESTING DATE.
Handel's	Messiah	is dying 7 5 9
Haydn	creates a	great souled hymn 8 0 9
Mozart's (Requiem)	queer	Ascension 7 9 1
Beethoven's	Fidelio	fits muses 8 2 7

HOW TO REMEMBER CHESS MOVES.

To remember any series of continuous moves upon the chess board, number words indicating the number of the squares should be selected from the Glossary and formed into sentences which can be easily remembered.

The squares of the chess board are supposed to be numbered consecutively in horizontal lines, beginning at the top left-hand corner.

If the moves to be remembered are numerous like the "Knight's Tour," they should be divided into a series of ten or less in each series. Thus the "Knight's Tour" gives 63 moves, exclusive of the final move to its original position, and 60 of these may be expressed in six sentences containing ten moves in each.

The following sentence gives the first ten moves from its ordinary position in square No. 2 :—

Coming in, shoeblack perched on pilot's sky blue log book,
1 9—9—2 6— 4 1—5 8—5 2—6 2

Shylock seeming neuter.
5 6—3 9—2 4

In the above sentence, Shylock is supposed to have prompted the theft. Six such like sentences with a short one of three added, would give the whole 64 moves back to its original position in square No. 2.

KEY APPLICATION TO THE "KNIGHT'S TOUR," ETC.

A more certain method for a long series of moves (such as the "Knight's Tour") and one which will enable every move to be played more readily and quickly, is to use the Alliterative Key and associate the number words giving the moves, with their key words in their due order from 1 to 63. Thus, take the first four moves: —

KEY WORD	NUMBER WORD	ASSOCIATION
can	canning	canning meat or fish
cook	dine	naturally connected
key	music	major or minor key
cur	organ	curs often bark at street organs

In all such cases, the number words should be taken from the Glossary, selecting those most concrete and striking or most in harmony with the key words with which they have to be associated.

We have prepared a special Supplementary Paper for chess players, giving the whole of the legitimate

moves comprised in the "Knight's Tour," as worked out by Euler, the great mathematician, all connected with their key words in their consecutive order, of which the foregoing form the first four.

To remember the moves of the other Pieces.

To remember any series of moves by any of the primary pieces, as the King, Bishop, Castle, etc., the number words used to remember them should begin with the same letter. Thus, the Bishop's move to square 48 could be indicated by "Bargate," to square 39 by "Beaming," to 16 by "Bannack," etc.

These may be associated with the key words in due order if numerous, or they may be linked together in sentences, taking care that the first word or syllable of the association begins with "r" to indicate the right or Queen's side ; while an "l" may be used to indicate the left or king's side.

Movement of Pawns.

To remember the movement of any pawn, two words are required. Thus suppose we wish to remember that the first move of the knight's pawn should be over two squares to allow immediate play both to the Queen and Bishops, the term "Knight's pew" would suggest it; the word "pew" indicating two by its sound. Other special moves to any square can be also suggested by the directions already given.

GENERAL APPLICATIONS.

To recollect any event, fact, or transaction in connection with any name, person, or place, the two should be associated by utilising the most prominent or best known feature of each fact, name, or person dealt with. Thus, a person recently enquired, "How can I remember that Breslau is in a mining district ?" The two are easily

united by utilising some prominent point from the name and from the fact, thus :—

Breslau—law, deeds, property, mining property—mines.

ENGAGEMENTS.

To rapidly arrange and recollect a series of engagements in a certain order, the "key" should be used and the various engagements connected with the key words as they are required to be brought to mind ; but to remember a short series of facts or events with each other, they may be correlated together or combined by Suggestive Contractions. (See Chap. XIII.) Thus the following sentence, which concerning Egypt is now true through improved administration, will suggest the principal countries from which we obtain cotton :—East and West Indies, Egypt, and America.

Cotton grows East and West o'er Egypt's merry acres.

The principle of Suggestive Contractions is of illimitable application, and enables the student to group together essential facts in any required order. In this way, extensive masses of information may be easily held together in the mind by the merest fragments or parts, if those parts are wisely made use of.

MEMORIZING AN AUTHOR'S WORKS.

This may be done either by Correlation or by Suggestive Contractions, and we therefore give an example of each process. Its design is to link the principal works of any author to his or her name, and we will take Charles Dickens, one of the most prolific and difficult, as an example

By Correlation.

Dickens, dick, pick, Pickwick, week, moment, nick of time, Nicholas Nickleby, nickel, silver, copper, David

Copperfield, field, farmhouse, Bleak House, bleak, cold, barn-like, Barnaby Rudge, rut, road, winding, twisting, Oliver Twist, twisted, knarled tree, curious, Old Curiosity Shop.

By Suggestive Contraction.

In Dickens pic-nic field a bleak barn twisted curiously.

The underlined syllables suggest the principal works referred to in our last illustration.

In this way also may the title of any work be associated with its principal characters.

To remember the author of any poem, phrase, or passage, take from it the most prominent word and correlate it to the author's name, as shewn above, and in the chapter on "Methods of Application."

FRACTIONS.

In dealing with fractions relating to fourths, as in farthings, or in degrees as shewn in latitude and longitude, the denominator should always be regarded as consisting of fourths. Thus $\frac{1}{2}$ should be read as $\frac{2}{4}$ (two fourths). By this means, the numerator need only be remembered, the denomination of the lower figure being always understood. Hence, fractions of pence should always be reduced to fourths. Thus to remember that beet sugar is 9/4½ per bag,

Beet in jars use
9 4 2

would suffice; or by using the initial letter to indicate "beet," but three words only would be sufficient, as

Bent jars use.
9 4 2

GLOSSARY OF WORDS EXPRESSING NUMBERS

This Glossary is only designed as a nucleus to guide the student in forming one for himself more comprehensive and complete. An ordinary exercise book should be ruled for the purpose, in which new words expressing numbers may be daily added. The student should always be on the look-out for such words, especially those expressing three or four figures. These longer words will prove very serviceable, as they will often be found to express in themselves some important numerical fact which it may be very essential for him to remember.

Words Representing the Cypher.

shew	ho	toad	old	whole	coast	tone	boat
show	hoe		scold		host	zone	cote
sloe	lo	doze	sold	coach	most		coat
slow	low	froze	told	broach	post	cope	dote
snow	grow	close		poach	toast	hope	float
so	know	hose	bole	roach		grope	gloat
sow	mow	chose	cole		blown	mope	groat
stow	no	knows	coal	home	sewn	pope	goat
though	oh	nose	bowl	comb	sown	rope	mote
throw	row	rose	dole	dome	bone	scope	moat
throe	roe	prose		foam	cone	soap	rote
trow	sew	pose	foal	loam	crone		note
tow	woe	those	goal	roam	flown	clove	quote
toe		foes	mole	Rome	grown	drove	oat
bow	bode		pole		lone	grove	smote
blow	goad	bold	role	globe	loan	rove	stoat
crow	lode	cold	roll	robe	moan	stove	throat
dough	load	foaled	scroll	Job	own	throve	vote
doe	mode	fold	shoal	probe	prone	wove	wrote
flow	ode	gold	soul		shewn	hove	
foe	road	hold	sole	boast	stone		
glow	rode	mold	stole	ghost	throne	bloat	
go	strode	mould	toll	roast		mote	

Words Representing Number One.

run	tun	champ	dance	hand	man	plant	pang
shun	ton	tramp	lance	land	clan	pant	slang
bun	son	cramp	glance	strand	scan	rant	sprang
fun	won	damp	trance	sand	span	scant	
pun		lamp	prance	stand	pan	slant	swan
Hun	cram	swamp	chance	wand	tan	aunt	con
gun	ram	stamp	and		wan		don
done	dam	camp	band	bann		bang	bon
nun	ham	font	gland	can	ant	clang	on
shun	swam	want	bland	fan	cant	fang	one
sun			brand	ran	chant	rang	none
stun			grand	dan	grant	bang	
bond	strong	plump	drum	thumb		stung	bunt
fond	throng	pump	dumb	plumb	bung	sung	punt
pond	thong	rump	gum	numb	rung	swung	

Words Representing Number One (continued).

wand		stump	glum	once	chung	tongue	drunk
conned	bump	trump	hum	dunce	flung	young	monk
	clump	thump	mum		dung		junk
gong	crump		rum	bunch	lung		slunk
wrong	dump	bomb	plum	lunch	slung	blunt	sunk
song	hump	come	sum	hunch	sprung	brunt	trunk
long	jump	chum	scum	punch	strung	grunt	bunk
prong	lump	crumb	some	munch		hunt	shrunk

Words Representing Number Two.

blew	hew	yew	rook	bloom	lune	swoop	choose
brew	hue	you	shook	broom	moon	troop	loose
chew	Jew	woo	look	doom	noon	whoop	moose
clue	Kew		Luke	gloom	soon		news
cue	new	brood	took	groom	swoon	boot	use
crew	knew	food		boom		loot	duce
do	shoe	mood	mule	loom	hoop	mute	fuse
due	screw	rood	rule	room	coop	lute	boose
drew	strew	hoof	yule	tomb	droop	brute	ooze
ewe	shrew	roof	school		soup	root	noose
few	threw	proof	fool	spoon	dupe	route	goose
flue	through		cool	boon	loop	shoot	Ouse
flew	too	book	stool	June	poop	suit	
glue	true	cook	pool	prune	scoop	soot	
grew	view	brook		tune	stoop		

Words Representing Number Three.

bee	key	she	beach	teach	leak	sleek	feel
be	knee	the	bleach		Greek	sneak	heal
sea	lea	thee	breech	beak	leek	speak	heel
fee	lee	three	each	bleak	meek	squeak	keel
flea	me	wee	leach	cheek	peek	week	kneel
flee	pea	we	peach	creek	pique	weak	meal
glee	plea	tree	preach	creak	reek		peal
free	quay		reach	eke	streak	deal	peel
he	see	beech	speech	freak	shriek	eel	reel
steal	stream	fleece	cheat	bleed	clear	sphere	
steel	teem	grease	eat	creed	dear	shear	
squeal	team	lease	feat	breed	deer	stear	cleave
teal	theme	niece	feet	feed	drear	steer	grieve
veal		peace	fleet	greed	fear	tier	eve
weel	been	piece	greet	freed	ear	tear	heave
wheel	bean	cease	meet	knead	year	near	leave
zeal	clean	beast	mete	lead	here	pier	sleeve
seal	dean	east	meat	mead	hear	weep	thieve
	green	feast	heat	weed	jeer	creep	weave
dream	keen	least	neat	need	leer	deep	
cream	lean	priest	peat	plead	Lear	cheap	breeze
bream	mean		pleat	read	mere	heap	freeze

Words Representing Number Three (continued).

beam	mien	breathe	seat	reed	near	keep	case
deem	queen	seethe	sheet	seed	peer	leap	please
gleam	screen	sheath	sleet	speed	queer	neap	sneeze
ream	seen	wreath	street	steed	rear	peep	squeeze
scream	scene		sweet		sear	reap	tease
scheme	spleen	wheat	treat	beer	seer	sheep	wheeze
seam	wean	beat		bier	slear	sleep	these
seem		teat	bead	cheer	smear	steep	
steam		bleat	deed	blear	spear	sweep	

Words Representing Number Four.

are	aire	pair	where	heart	birth	fir	third
bar	air	pear	weir	hart	dearth	cur	word
car	bare	rare		part	earth	err	
czar	bear	scare	card	smart	mirth	fur	sward
far	glare	share	bard	start		her	horde
jar	care	snare	guard	tart	churl	sir	cord
mar	chair	spare	hard	quart	curl	slur	lord
par	dare	square	lard	wart	earl	spur	ward
spar	fare	stare	marred	thwart	furl	stir	
star	fair	stair	yard		girl	blur	dirge
tar	flare	swear		birch	hurl	heard	purge
for	hare	tear	art	church	pearl	herd	scourge
nor	hair	tare	cart	lurch	whirl	sherd	serge
or	lair	their	chart	perch	twirl	bird	surge
war	mare	there	dart	search		curd	urge
	pare	ware	mart			gird	verge
	curt	squirt	stern	sworn		jerk	thirst
curse	blurt	wert	turn	thorn		kirk	worst
hearse	dirt		urn	torn	curb	lurk	
nurse	flirt	learn	yearn	worn	herb	turk	
purse	girt	churn		warn	verb	work	
terse	hurt	earn	born	borne			
verse	pert	fern	corn	serve	burke	burst	
worse	shirt	heron	shorn	curve	dirk	durst	
	skirt	learn	horn	nerve	firk	curst	
birt	spurt	spurn	scorn	swerve	lurk	erst	

Words Representing Number Five.

by	sly	voice	Mike	time	sire	mite	blithe
bye	spy		pike	slime	spire	plight	lithe
buy	sty	bride	spike	wipe	squire	right	
cry	thigh	bide	strike	gripe	tire	quite	dive
dry	tie	chide	wife	pipe	wire	rite	gyve
die	vie	died	fife	ripe		site	drive
lie	try	dyed	knife	snipe	bite	sight	hive
fly	why	glide	life	stripe	cite	slight	rive
eye		guide	rife	type	sight	spite	strive
pie	ice	hide	strife	tripe	blight	spright	thrive

Words Representing Number Five (continued).

fry	dice	pride			bright	smite	
high	lice	ride			bight	tight	guise
hie	mice	side	chime	dire	fight	trite	prize
nigh	price	slide	climb	fire	height	white	wise
my	rice	stride		hire	fright	wight	rise
rye	slice	tide	crime	ire	flight	wright	size
ply	spice	wide	grime	lyre	kite	write	
pry	thrice	cried	lime	mire	knight		bribe
shy	trice		rhyme	quire	night	tithe	scribe
sigh	twice	dike	prime	choir	light	writhe	tribe
sky	vice	like	thyme	shire	might	scythe	

Words Representing Number Six.

fix	brick	chick	pick	sick	sex	wreck	fleck
six	dick	click	nick	thick	vex	beck	neck
mix	kick	lick	prick	wick	next	check	peck
sticks	crick	Mick	quick		text	deck	speck
		deck	pack	egg	stock	tuck	rig
	frock		quack	dreg	duck	truck	sprig
ox	flock	back	rack	keg	buck		twig
box	knock	black	slack	leg	chuck	big	wig
fox	mock	clack	sack	peg	luck	dig	
cox	lock	crack	smack	beg	pluck	fig	
	smock	hack	tack	act	puck	jig	
clock	rock	jack	track	fact	ruck	gig	
block	shock	nack		tract	stuck	pig	
cock	sock	lack		tact	suck	prig	

Words Representing Number Seven.

give	muff	if			pest	list	lust
live	puff	cliff	ash	bess	test	mist	bust
sieve	ruff	skiff	cash	bless	vest	whist	thrust
dove	rough	sniff	clash	cess	nest	twist	
love	tough	stiff	crash	chess	west	wrist	blush
glove		whiff	dash	cress	jest		crush
shove	chaff	tiff	flash	dress		cross	brush
have	laugh		gash	guess	bliss	dross	bush
	gaff	ass	gnash	less	kiss	foss	flush
cough	quaff	brass	lash	mess	hiss	loss	rush
off	staff	class	hash	press	this	moss	hush
trough		gas	plash	stress	is	toss	
scoff	cleft	glass	rash		miss	was	huss
bluff	left	grass	mash	best	whiz		fuss
buff	theft	has	sash	lest	dish	dust	thus
cuff	draft	as	quash	breast	fish	crust	truss
huff	draught	lass	slash	crest	wish	trust	us
gruff	haft	mass	thrash	guest		must	
luff		pass	trash	rest	fist	just	

Words Representing Number Eight.

hate	grate	prate	straight	brat	mat	spat	base
bait	mate	plate	weight	cat	hat	that	brace
date	late	sate	freight	chat	pat	vat	case
fate	wait	skate		fat	plat	sat	dace
gate	plait	slate	at	flat	rat	yacht	chase
great	rate	state	bat	gnat	sprat		face
grace	ale	sprain	reign	pit	cot	slut	make
lace	dale	strain	rain	quit	dot	smut	quake
mace	bale	gain	rein	slit	clot	strut	rake
pace	hail	stain		split	got		stake
place	bail	swain	aim	spit	hot	chaste	sake
race	fail	train	blame	tit	jot	haste	slake
space	frail	twain	came	twit	knot	paste	snake
trace	gale	vain	claim	whit	not	taste	take
	hale	vein	dame	wit	lot	waste	wake
aid	jail	wane	fame	writ	plot		
glade	mail	bane	flame	mit	pot	ape	doubt
braid	male	blain	frame		rot	cape	gout
blade	nail	brain	game	bet	scot	grape	pout
jade	quail	cane	lame	debt	shot	gape	scout
lade	rail	chain	name	fret	squat	rape	shout
made	sail	crane	tame	get	sot	drape	spout
maid	sale	drain	shame	jet	spot	scrape	trout
weighed	scale	Dane		pet	what	shape	
shade	snail	fain	bit	let		tape	bathe
raid	stale	feign	fit	net	but		lathe
trade	trail	grain	sit	set	cut	ache	swathe
wade	tale	lain	cit	sweat	glut	bake	scathe
	veil	lane	flit	threat	butt	cake	
waif	vale	main	grit	whet	hut	brake	
chafe	wail	mane	hit	wet	nut	break	
safe	whale	pain	kit		put	drake	
		plain	knit		rut	flake	
	slain	plane	nit	blot	shut	lake	

Words Representing Number Nine.

nine	shine	vine	grind	grin	spin	hymn	
bine	Rhine	wine		in	thin	him	Ben
line	sign	whine	bin	inn	twin	limb	den
dine	spine	bind	chin	kin	win	skim	fen
chine	shrine	kind	din	pin		slim	glen
fine	swine	find	fin	shin	brim	swim	hen
kine	thine	mind	jin	sin	dim	trim	ken
mine	tyne	hind	gin	tin	rim	sim	men
pine	twine	blind	glyn	skin	grim	Tim	pen
then	fend	tend	send	pent	jem	rinse	sense
when	friend	trend	vend	rent	hem	since	thence
wren	lend	wend	blent	spent	stem	wince	whence
	mend		gent	tent	them		
bend	rend		Kent	vent		pence	
end	send	bent	lent	went	mince	hence	
blend	spend	cent	meant		prince	dense	

01	02	03	04	05
ocean	globule	holy	Homer	low tide
lotion	boat-hook	lowly	roamer	hautboy
potion	cocoon	pony	polar	post boy
motion	old moon	bony	solar	go by
notion	old shoe	rosy	rower	
Roman	so few	posy	mower	
Onan	no room	croaky	roller	
foeman		smoky	poker	
joram		mouldy	ochre	
forum		trophy	loafer	
bowman			bloater	
postman			voter	
oakum			blower	
			slower	

in this manner combine words from the single columns

combine words from the single columns.

06	07	08	09	10
moleck	notice	poet	crowing	banjo
row lock	lotus	omit	rowing	Congo
kopeck	locust	bowsprit	sowing	Mungo
poleaxe	crocus		loaming	sunstroke
	bonus		moaning	unyoke
	Jonas		groaning	unfold
	knowest		growing	untold
	blowest		showing	manhole
	Joseph		throwing	control
			going	console
	roses		token	compose
	Moses		omen	unknown
			lowing	
			towing	

combine words from the single columns.

combine words from the single columns.

11	12	13	14	15
cannon	canoe	candy	conger	convoy
canon	undo	dandy	longer	annoy
common	on view	monkey	hammer	bonfire
onion	lampoon	donkey	rammer	conspire
bunion	thumbscrew	mummy	panther	comply
gammon	bamboo	funny	banner	untie
Tom Thumb	commune	money	tanner	contrive
humdrum	commute	sunny	runner	transcribe
mammon	compute	plumtree	gunner	concise
ammon	manure	bandy	camphor	confide
Canton	unsure	handy	lumber	compile
London	Canute	sandy	number	transpire
undone	uncouth	brandy	amber	umpire
quondam	tomfool	humbly	rambler	comprise
random		comely	angler	unwise
sandon		honey	tumbler	conjoin
hangman		bonny	banker	sometime
hansom		shanty	canker	sunrise
phantom		Dante	planter	one eye
bantam		sunbeam	thunder	
puncheon			blunder	
unction			slumber	
			Humber	

16	17	18	19	20
convict	compass	comet	convent	Crusoe
convex	compress	trumpet	consent	Hugo
complex	confess	jampot	content	shoe-sole
annex	canvas	bonnet	pumpkin	do so
hammock	handcuff	hamlet	bumpkin	you know
bannock	handmuff	campaign	famine	blue coat
compact	languish	sonnet	nonsense	Jew wrote
transact	anguish	hand rail	contempt	tombstone
contract	transgress	translate	commence	soon home
connect	undress	bondslave	condense	
concoct	confest	conclave	coming	
transfix	contest	cannot	Blondin	
conduct	congest	commit	landing	
construct	consist	complot	unkind	
ransack	ambush	bandit	consign	
comeback	conquest	champagne	confine	
context	congress	landscape	combine	
chronic	fondness	unsafe	humming	
frantic	punish	convey	summing	
antic	honest	complain	running	

21	22	23	24	25
Teuton	Two shoes	tureen	tutor	toolwright
stewpan	new shoes	beauty	Tudor	new light
human	jujube	duty	ewer	moonlight
durance	Zulu	sooty	newer	schoolboy
Newland	blue-book	gloomy	rhubarb	new toy
Ulan	boat-hook	roomy	fewer	unite
truant	true book	coolie	purer	blue eye
truman	new rule	ruly	surer	rook pie
Newton	new school	duly	bloomer	goose oil
Susan	new moon	purely	ruler	newsboy
Soudan.	too soon	surely	curer	July
		fury	future	fruit pie
		Jewry	pewter	look high
		jury	neuter	
		Susy	brewer	
		puny	bugler	
		fusee	humour	
		booby	tumour	
		Lucy	lucre	
		ruby	suitor	

26	27	28	28	29
tunic	tourist	toothache	toothring	tea rose
music	Jewess	Yule cake	soothing	repose
shoeblack	Suez	cruet	student	depose
screwjack	Judas	suet	prudent	negro
blue frock	lewdness	curate	roofing	Defoe
eunuch	rudeness	duet	ruin	Creole
new dock	toothless	roulette	shooting	below
boot jack	shoeless	humane	brewing	bemoan
Lubeck	Lucas	moonlit	looking	reproach
rubric	mucous	look out	prudence	reload
	mulish	book case	pew rent	bespoke
	foolish	shoe lace	bruin	revoke
	fruitless	crusade	new inn	behold
	prudish	unit	stewing	elope
	roofless		supine	remote
	Rufus			devote
	ruthless			denote
	brutish			
	sootish			

31	32	33	34	35
tea bun	teaspoon	tepee	tea urn	trefoil
treason	tea-room	beef-tea	return	recoil
Edom	beetroot	seaweed	cigar	beehive
besom	tree root	seabeach	debar	derive
reason	Hebrew	beseech	cedar	deride
season	bedew	repeal	regard	beside
began	review	reveal	reaper	seaside
Sedan	renew	redeem	cheaper	decide
trepan	resume	degree	keeper	decry
remand	rebuke	decree	sleeper	defy
recant	seclude	deceive	peeper	deny
beyond	preclude	believe	creeper	defile
belong	elude	receive	dreamer	beguile
seaman	delude	retrieve	steamer	revile
benumb	seduce	defeat	preacher	desire
become	reduce	deceit	teacher	retire
begun	recluse	retreat	Cæsar	delight
demon	repute	decrease	depart	recite
deacon	refute	release	sweetheart	revive
	recruit	between	beware	deprive

36	37	38	39	40
tree-frog	treatise	teapot	tea things	turncoat
sea dog	Beatrice	besot	leavings	furcoat
peacock	giraffe	create	Pekin	barrow
Enoch	Freeshalf	debate	sealskin	harrow
seasick	enough	relate	feeling	narrow
beeswax	rebuff	regret	peeling	sorrow
relax	depress	beset	kneeling	morrow
detract	redress	beget	heaping	corrode
enact	repress	emit	beating	forebode
react	refresh	refit	keeping	foretold
refract	bequest	debase	reading	morose
detect	detest	retrace	eating	forego
deject	request	deface	sleeping	foreknown
erect	Remus	bewail	reaping	foreshow
elect	Demas	regale	leaping	o'erthrown
reflect	desist	retail	creeping	burrow
reject	resist	degrade	reeling	furrow
select	repast	detain	heeling	borrow
deduct		refrain	resign	charcoal
prefix		regain	repine	Marco
		remain	decline	

41	42	43	44	45
foreman	fortune	firtree	farmer	forelight
oarsman	cartoon	Turkey	charmer	foresight
organ	harpoon	murkey	mirror	turnstile
Morgan	curfew	dirty	murmur	turmoil
Jordan	pursue	darkey	warder	perspire
Horton	perfume	perceive	garter	survive
Norton	forsook	foresee	tartar	surprise
Mordaunt	permute	sherry	order	surmise
pardon	pursuit	perry	horror	air-tight
Larum	hirsuit	berry	larder	fair-fight
person	forsooth	bury	further	Carlisle
parson	foreknew	sorry	father	Carlyle
arson	Khartoum	Orry	Martha	purloin
carman	Gertrude	curtsey	murder	sirloin
carrion		party	harbour	fortnight
baron		hearty	porter	
Sharon			barter	
			swearer	
			bearer	
			border	

46	47	48	49	50
forelock	forest	ferret	farthing	fly boat
burdock	fairest	merit;	furling	dry coat
garlick	carcass	carpet	curling	milestone
arrack	Argos	target	curtain	limestone
correct	heiress	forget	firkin	Shiloh
perplex	arras	cornet	certain	tyro
perfect	cuirass	forgot	virgin	toy show
lyric	morass	hariot	hairpin	by road
Herrick	surpass	hermit	perkin	high road
Garrick	forecast	carrot	jerkin	sly rogue
Carrick	caress	parrot	tearing	my own
barrack	arrest	hornet	airing	Tyrone
Arctic	purchase	market	bearing	high-flown
verdict	furnish	arcade	wearing	Milo
	forgive	parade	hurling	fly-blown
	nervous	persuade	whirling	iceboat
	careless	pervade	soaring	
	hairless	ordain	pouring	
	Marcus	forsake	snoring	
	persist	partake	working	
		curtail	shirking	

51	53	53	54	55
fireman	fireproof	fire-screen	friar	firefly
hired man	high roof	night scene	buyer	lifebuoy
lion	toy book	ivy	tiger	high tide
Zion	high school	tidy	rider	fireside
syphon	boy blue	wily	spider	firelight
pliant	high stool	icy	cloister	skylight
finance	sky blue	tiny	oyster	bright-eyed
tyrant	wild goose	sprightly	riper	bright side
hydrant	typhoon	nightly	viper	night light
iron	high pew	briny	piper	firefly
Ireland	tight shoe	slimy	cider	bye by
island		spicy	wider	childlike
Hilam		knightly	biter	typhoid
Hiram		brighqly	writer	sidelight
Byron		oily	nitre	
Simon		Riley	mitre	
bison		miry	lighter	
poison		fiery	fighter	
		wiry	snider	
		shyly		

56	57	58	59	60
fire-lock	fire brush	fire-grate	filing	fox-hole
Shylock	Irish	whitebait	hireling	slack coal
knife box	stylish	pilot	trident	black hole
climax	pie crust	Pilate	silent	frock coat
direct	Cyprus	pirate	dying	egg yoke
dry dock	Cyrus	riot	lying	deck load
high rock	cypress	Wyatt	spying	Wicklow
my frock	Titus	Myatt	crying	cockroach
wild hog	eyelash	fiat	buying	big toe
sly dog	my love	white hat	sighing	expose
dry sticks	thy love	dry mat	prying	dog-rose
high back	Midas	fly at	biting	pig's nose
	Silas	high way	fighting	coxcomb
	pious	by way	lighting	big stone
	bias	high day	slighting	explode
	joyous	by lane	blighting	
	joyless	climate	firing	
	eyelash		hiring	

61	62	63	64	65
fiction	fixture	fig tree	figure	fig-pie
diction	mixture	Black-sea	nigger	necktie
packman	frog stool	jockey	cracker	pig sty
auction	duck pool	cockney	backer	black eye
faction	cuckoo	exceed	wicker	bagpipe
action	excuse	succeed	bicker	black pipe
Dixon	exclude	duckweed	flicker	big light
Stockton	exude	buckbean	Proctor	big kite
Buxton	exhume	lucky	doctor	big toy
Caxton	accrue	plucky	vigour	cock fight
Lackland	big shoe	ugly	beggar	thick night
black swan	log book	lackey	bigger	dog fight
wigwam		blackey	liquor	exile
succumb		Hackney	wrecker	excite
expunge			rocker	acquire
expand			mocker	expire
expanse			knocker	exploit
extant			blacker	
dockman			picture	
blackstone				

66	67	68	69	70
fig box	flagstaff	frigate	fig wine	fresco
black ox	Macduff	wicket	pig's chine	lasso
pickaxe	Bacchus	bucket	chicken	disrobe
picklock	access	locket	Dickens	disown
Pickwick	aggress	rocket	licking	disthrone
picnic	success	pocket	kicking	aslope
extract	express	cricket	picking	discourse
quick stick	exist	ricket	extent	dispose
exact	accost	picket	extend	disclose
expect	exhaust	socket	accent	bestow
neglect	legless	bracket	expense	crossroad
knick-knack	Skegness	racket	fixing	Castro
	luckless	packet	mixing	
	jackass	drugget	stocking	
		nugget	mocking	
		acquit	knocking	
		exit	shocking	
		jacket	cackling	

71	72	73	74	75
Freshman	festoon	fish-spear	fisher	fishwife
fustian	mistook	cashier	wisher	sapphire
fashion	costume	austere	liver	aspire
pheasant	mushroom	coffee	quiver	assize
lesson	misrule	toffee	treasure	aside
Weston	dispute	pussy	measure	astride
ration	misuse	fussy	pleasure	descry
vision	disused	lassie	Esther	espy
mission	disproof	Cassy	jester	dislike
passion	assume	dizzy	lesser	pastime
bastion	assure	rusty	master	esquire
distant	askew	dusty	castor	affright
distance	eschew	musty	faster	disguise
cousin	astute	disease	plaster	chastise
cushion	buffoon	displease	presser	
question		blaspheme	wrestler	
rostrum		trustee	Hussar	
nostrum		lessee	river	
			giver	
			never	
			ever	

76	77	78	79	80
physic	fastness	flasket	fish tin	flat pole
mystic	vastness	basket	ash bin	rat hole
rustic	mastiff	casket	muffin	motto
cassock	mischief	russet	coffin	grotto
cossack	moustache	rough it	coughing	pithole
distract	Christmas	buffet	laughing	atone
dissect	massive	covet	Ruskin	gritstone
suspect	passive	rivet	muslin	whetstone
Chiswick	fishes	estate	passing	cat's-paw
snuff-box	possess	mistake	pushing	hat show
caustic	discuss	biscuit	rushing	hot coal
Essex	distress	essay	crushing	hot roll
Sussex	misgive	dismay	blessing	kitto
	assess	display	pressing	cato
	assist	astray	loving	May-pole
	dismiss	escape	living	
	distrust	assail	giving	
	disgust	cascade	scoffing	
	crevice	disdain	having	

81	82	83	84	85
pitman	pothook	patty	potter	potboy
hatstand	spittoon	settee	butter	Lot's wife
Rutland	attune	city	grater	foot light
Jutland	tattoo	pity	prater	attire
cotton	statute	ditty	nature	satire
Hatton	footstool	Kitty	cutler	nut oil
Watson		witty	butler	eat eye
bottom		Patsy	waiter	daylight
atom		Betsy	traitor	
button		petty	better	
Sutton		jetty	fetter	
nation		putty	letter	
station		Paley	hatter	
Briton		daily	matter	
matron		daisy	fitter	
bacon		crazy	litter	
patron		lazy	bitter	
Satan			platter	
Laban				
Haman				
cayman				

86	87	88	89	90
Patrick	Patmos	pottage	patten	pinfold
attic	Amos	cottage	Latin	enrolled
hatbox	mattress	hatchet	matin	enfold
mattock	atlas	latchet	satin	window
Attock	lettuce	cadet	kitten	winnow
attract	lattice	eatgut	mitten	encroach
attack	cutlass	what-not	bitten	Pinto
hay cock	footless	tit-bit	written	minnow
hay rick	buttress	chit-chat	batten	enrobe
	gratis	maintain	tatting	enclose
	cut glass	attain	latent	enthrone
	hatless	pay day	patent	invoke
	tasteless	May day	knitting	in hope
	races		fitting	inwove
	faces		flitting	impose
	Cadiz		spitting	limbo
			betting	
			setting	
			getting	
			wetting	

91	92	93	94	95
income	Hindoo	intrigue	inkhorn	invoice
infant	entomb	impede	fender	entice
lemon	ensue	indeed	Endor	penknife
Kenyon	imbrue	penny	sender	imbibe
pinion	inhume	Jenny	gender	inscribe
minion	impute	finny	lender	imply
Minton	induce	dimly	vendor	inside
Lincoln	include	simply	tender	insight
mention	intrude	wintry	timber	indite
tension	immure	gentry	splendour	in time
Fenton	insure	entry	swimmer	in rhyme
Benson	inure	sentry	singer	
Henson		tiny	ringer	
pension		finely	dinner	
tympan		blindly	thinner	
Hinnom		kindly	winner	
rimmon		Lindley	simmer	
enchant		Henley	enter	
encamp		empty	cinder	
		plenty	tinder	

96	97	98	99	100
index	Indus	inmate	engine	Unyoro
syntax	windlass	ingrate	linen	Mont Fogo
mimic	sinless	linnet	winning	Comoro
inflict	Indies	minute	swimming	Sonoro
insect	tennis	gimlet	sinning	
induct	finish	Bennett	trimming	(combine other words as follows)
hemlock	thinish	emmet	Linden	
chymic	limbless	embrace	grinning	
Kendric	endless	invade	singing	Congo boat
inject	gymnast	engage	ringing	Pondo gold
inspect	inmost	enrage	swinging	unknown road
inflect	hindmost	impale	lending	an old robe
intact		inhale	bending	etc.
		entail	ending	
		in vain		
		enchain		
		inlay		
		limit		

101 commotion
103 canopy
104 composer
108 annotate
109 anodyne
111 companion
114 commander
115 canonise
117 wantonness
118 cannonade
119 commandment
121 conclusion
127 conducive
128 amputate
129 concubine
130 antidote
131 champion
132 ante room
133 vanity
134 monitor
135 antichrist
137 handicraft
138 candidate
139 continent
140 thunderbolt
141 conversion
142 kangaroo
143 canary
144 wanderer
145 drummer-boy
146 Antartic
147 handkerchief
148 banneret
149 undermine
151 annoyance
154 lamplighter
157 bronchitis
159 handwriting
160 anecdote
161 complexion
164 conductor
170 phantoscope
171 confession
173 honesty
174 ancestor
176 fantastic
177 compasses
178 confiscate
179 punishment
181 plantation
183 committee
184 translator
191 convention
194 condenser
197 drunkenness
198 compensate
199 contentment
214 cucumber
216 pneumonic
224 tubular
227 scrupulous
230 studio
231 Puritan
233 Jubilee
234 Juniper
235 stupefy
236 crucifix
237 furious
238 muriate
239 nutriment
243 rookery
244 usurper
245 supervise
247 Eucharist
249 superfine
267 blue-stocking
271 musician
277 nutritious
280 mulatto
281 duration
283 humanely
284 newspaper
286 rheumatic
294 bookbinder
297 looking-glass
300 creosote
301 decorum
306 heroic
307 ferocious
310 piano
311 presumption
314 decanter
316 pedantic
321 delusion
324 seducer
327 delusive
330 merino
331 medium
333 deity
334 redeemer
337 tedious
338 mediate
339 requiem
340 wheelbarrow
341 desertion
343 scenery
344 reporter
347 eagerness
348 demerit
349 preferment
351 defiance
353 delighted
354 designer
357 decisive
359 retirement
360 sirocco
361 prediction
363 dejected
364 reflector
367 detective
371 petition
374 deliver
377 delicious
379 refreshment
380 stiletto

381 creation
383 degraded
384 creator
386 emetic
387 evasive
390 memento
391 pretentions
393 regency
394 defender
397 relentless
399 delinquent
400 aeronaut
401 cormorant
402 arrowroot
403 parody
404 corona
405 aerolite
406 orthodox
407 corrosive
408 coronet
409 heroine
410 Toronto
413 Burgundy
414 guarantor
415 circumcise
416 sardonic
417 organist
418 personate
419 circumvent
423 perjury
424 circular
427 garrulous
428 fortunate
429 porcupine
430 torpedo
431 artizan
432 fortitude
433 Pharisee
434 gardener
435 Carmelite
436 heretic
437 terminus
438 chariot
439 harlequin
441 martyrdom
443 surgery
444 murderer
447 barbarous
448 verberate
454 survivor
459 surprising
460 Morocco
461 correction
464 character
467 perspective
468 air-jacket
471 perdition
473 argosy
474 barrister
476 sarcastic
478 perquisite
479 nourishment
80 farrago
481 persuasion
484 surveyor
486 carpet-bag
489 surveying
491 Birmingham
493 certainty
494 carpenter
496 arsenic
497 portentous
499 turpentine
503 pioneer
505 idolise
508 violet
509 violin
510 night-commode
511 triumphant
513 irony
514 highlander
516 gigantic
541 lighterman
543 bribery
544 loiterer
547 boisterous
554 fire-lighter
570 microscope
571 Irishman
577 righteousness
581 highwayman
584 rioter
587 quietness
589 oil-painting
591 frying-pan
597 isinglass
598 nightingale
599 fire-engine
600 piccolo
601 explosion
604 October
605 crocodile
607 octopus
608 acrobat
611 backgammon
613 auctioneer
614 seconder
615 reconcile
617 accomplish
618 waggonette
619 recompense
621 occupant
624 secular
625 occupy
647 liquorice
649 nectarine
651 exciseman
654 backbiter
659 acquirement
665 recognise
668 pickpocket
671 accession
673 sacristy
674 aggressor
678 explicit
680 octavo

681 dictation
683 bigotry
684 bricklayer
685 pocket-knife
686 quixotic
688 cricket-bat
689 acquitment

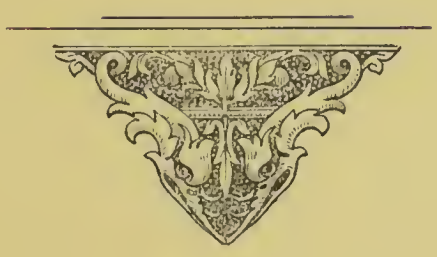
691 extension
694 rocking-chair
697 mackintosh
703 devotee
704 passover
706 chrysolite
707 frivolous
708 desolate
710 discompose
711 husbandman
713 peasantry
717 astonish
718 esplanade
723 refugee
724 muscular
726 bivouac
727 Esculus
728 rivulet
730 mosquito
731 covenant
732 destitute
733 destiny
734 officer
735 testify
737 precipice
738 profligate
739 dividend
741 fisherman
742 afternoon
743 raspberry
744 plasterer
745 reservoir
747 governess
751 affiance

754 assigner
761 destruction
764 disfigure
767 effective

771 discussion
773 sophistry
774 trespasser
777 asbestos
779 assassin
781 cessation
784 testator
785 ascetic
787 crustaceous
791 ascendant
793 assembly
794 messenger
797 Cavendish
798 fascinate
801 ottoman
806 rhetoric
808 bayonet
810 buttonhole
813 vacancy
814 stationer
815 patronize
816 Atlantic
821 petulant
824 ale-brewer
828 saturate
829 flatulent
830 petticoat
831 aide-de-camp
832 attribute
833 strategy
834 gamekeeper
835 ratify
838 etiquette
839 alien
841 veteran
843 attorney
844 flatterer

845 butterfly
846 cataract
847 bitterness
848 favourite
849 chattering
861 attraction
864 nut-cracker
867 attractive
873 atmosphere
874 paymaster
875 satisfy
876 retrospect
880 bravado
884 attainder
891 attendance
893 patentee
897 attentive
902 introduce
903 crinoline
904 inclosure
907 cenotaph
908 renovate
909 indolent
910 incommode
911 injunction
913 chimpanzee
914 pensioner
915 dynamite
916 dynamic
917 encompass
918 remonstrate
919 incumbent
921 infusion
923 penury
924 singular
927 strenuous
928 stimulate
929 genuine
930 envelope
931 mendicant
932 institute
933 remedy

934 vinegar
935 simplify
936 intellect
937 Pentecost
938 imitate
939 penitent
940 interlope
941 immersion
942 interlude
943 memory
944 emperor
945 enterprise
946 interdict
947 interest
948 temperate
949 insurgent
950 embryo
953 enquiry
954 enquirer
959 enlighten
961 infliction
963 mimicry
964 inspector
967 vindictive
970 indispose
971 impression
973 dynasty
974 impostor
976 gymnastic
978 implicit
979 investment
981 sensation
984 engraver
991 intention
993 engineer
964 inventor
996 intrinsic
997 incentive



SUPPLEMENTARY PAPERS

For the use of Students preparing for University, Civil Service, or other examinations, or engaged in any special study or profession in which they are designed to be of assistance.

1. London Matriculation History. Over 200 dates of important events, classified into periods.
2. Important Events and Dates of Ancient History from the Deluge to the Advent.
3. Latin Correlations ; 800 of the most difficult Latin words. Can be learned by twice reading.
4. French Correlations, arranged on the same plan.
5. Church History. Events and Dates ; and Church Councils with dates, objects, & places of meeting.
6. Classified English History, with the new key arrangement of Kings and Queens.
7. Scripture Narratives and Incidents, Discourses, and Parables, giving book and chapter where each is found.
8. Geography of Australasia, Africa, and South America ; 104 positions, enabling each map to be drawn from memory.
9. Memory Paper of Sacred History for Teachers and Preachers, with selected Bible Readings illustrating it.
10. Chemical Elements, suggesting Names, Symbols, and Atomic Weights.
11. Geography of British Isles, with positions enabling each map to be drawn from memory.
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13. Euclid Paper, Book I. Order and number of problems indicated by suggestive syllables in each.
14. Rules of Syntax, on the same plan ; 48 Rules of Composition from the best grammarians, with examples.
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17. Finance Paper, giving Life Assurance and Interest Tables, applicable to all amounts, periods, and rates of interest.
18. Memory Chart of Phrenology ; name and position of each organ learned in a few minutes.
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20. Presidents of the United States, their order and date of election, with other important particulars.
21. United States' History ; important Events and Dates.
22. United States and Territories, their areas in square miles, with other statistics.
23. Geography of North America, with Latitudes and Longitudes arranged as in papers 8, 11, and 12.
24. Memory Aids to Chess, giving all the 64 moves of the "Knight Tour."

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Upon which Students are allowed the use of the Supplementary Papers.

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Not more than five papers must be sent for at one time, except by special arrangement.



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Therefore, students are requested to keep the papers clean, as they have to be re-written after being out but a few times, and the labour of keeping the registers and doing this is considerable, some of them containing over 3,000 words.

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Printed papers need not be returned. The Latin Correlations have been printed already, and others will be if a sufficient demand is found for them.

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